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ADVANCED MANAGEMENT

OCTOBER 1954 VOLUME XIX NO. 10

In This Issue . . .

New Horizons For The Industrial Engineer
Harold F. Smiddy

Small Business Compensation And Incentive Plans
V. Henry Rothchild

Elements Of Democratic Supervision
Eugene E. Jennings

Today's Shortage Of Engineers: Fact of Fancy?
George S. Odiorne

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Table of Contents

THE SELECTION OF INDUSTRIAL ENGINEERING PERSONNEL
Charles A. Thomas

TRAINING OF INDUSTRIAL ENGINEERING PERSONNEL
Nicholas L. A. Martucci

TOMORROW'S MATERIALS HANDLING METHODS (PART I)
Matthew J. Murphy

FACTORS IN TODAY'S MATERIALS HANDLING METHODS (PART II)
Robert S. Rice

MATERIALS HANDLING: THE 1960 PICTURE (PART III)
Carroll W. Boyce

STANDARDS PERFORMANCE TIME FOR FORK TRUCKS
Oswald S. Carliss

PRIVATE ENTERPRISE AT NIAGARA FALLS
Earle J. Machold

MEASUREMENT OF MAINTENANCE LABOR
John S. Sayre

MEASUREMENT OF OFFICE OPERATIONS
J. Henry Parker

PREDETERMINED TIME STANDARDS IN THE NEEDLE TRADES
Miss Lea Terruzzi

PREDETERMINED TIME STANDARDS IN FABRICATION AND ASSEMBLY
Helmut C. Geppinger

FREEDOM WITHIN ENTERPRISE
The Honorable James C. Worthy

AUDITING OF WAGE INCENTIVE PLANS
D. F. Howe

COST REDUCTION INCLUDING WAGE INCENTIVE PLANS
Garland C. Martin

AUTOMATION: ADVANCES IN AUTOMATIC PRODUCTIONS
Robert T. Collins, presented by Robert Randel

ADVANCES IN STATISTICAL CONTROLS
Mel Hurni

DOMESTIC LEGISLATION VIA INTERNATIONAL TREATIES
W. L. McGrath

PRODUCTIVITY WITHOUT WAGE INCENTIVES
Robert E. Pomeranz

PRODUCTIVITY WITH WAGE INCENTIVES
Robert Jones

THE INDUSTRIAL ENGINEER AND LABOR CONTRACT CLAUSES
G. Jay Anyon

CREATIVE ARBITRATION
The Reverend Dennis J. Commey, S. J.

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CONTENTS

Editorial 4
by Dr. F. F. Bradshaw

New Horizons For The Industrial Engineer 5
by Harold F. Smiddy

Small Business Compensation And Incentive Plans 9
by V. Henry Rothchild

It's Fun To Run A Chapter 12
by Peter C. Dinos & Paul J. MacCutcheon

Are You Interested In Advancement? 15
by Weldon T. Ellis, Jr.

Elements Of Democratic Supervision 19
by Eugene F. Jennings

Today's Shortage Of Engineers: Fact Or Fancy? 23
by George S. Odiorne

How to Produce, Plan, Package And Sell Scientific Management 26
by Herman Limberg

New Management Writing 30

New Products 31

Chapter Activities 32

CIPM Reports 34

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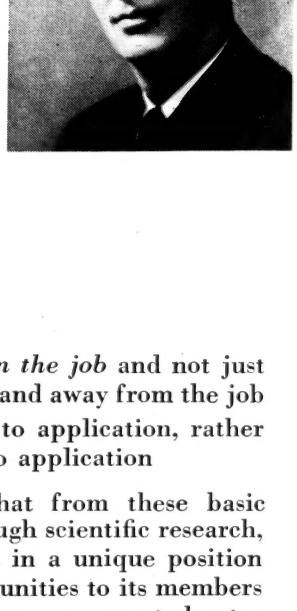
F. F. Bradshaw,
Executive Vice-President, SAM



The Advancement of Managers

THE only way to advance management is to advance managers. The only way for SAM to advance is through the advancement of its members. Therefore, the rock foundation of policy and program for the SAM must be the Society's contribution to the development opportunity of each Chapter and each member.

Today, more than ever, corporations, universities, professional associations, and consultants are promoting "Management Development Programs". Under these circumstances, it may seem surprising that SAM can still have an essential role to perform in Management Development. Why then have all officers and executive committee members recently voted unanimously that the Society provide a management development program to its members? The answer is clearly and cogently exhibited by the basic principles of adult education.

It is well known that adult learning demands that the learner—

Be active and not passive
Be in control and not subordinated
Work on his own specific problems and not on general problems
Learn continuously *on the job* and not just briefly, intensively, and away from the job
Work from problem to application, rather than from theory to application

We can readily see that from these basic principles, based on thorough scientific research, the local SAM Chapter is in a unique position to provide training opportunities to its members and potential members. In every respect chapter fostered training programs can illustrate the basic principles just described better than programs originating from any other source.

To enable the Chapters to provide such essential service, your National Headquarters is planning to furnish assistance by way of materials, syllabi, outlines, and leadership training. As soon as information is available concerning this new service, membership will be advised.

Such programs can well be the "essential link" between the Society and the Chapter, the Chapter and the member, the member and the *Advancement* of *Management*.

F. F. Bradshaw

Note: Our President, George Estes, hospitalized by an injury, has asked the Executive Vice President to act in his behalf for a few weeks. Now out of the hospital, it appears that President Estes will be back on the job before the next issue.

HAROLD F. SMIDDY, Vice President of General Electric and head of that firm's Management Consultant Services Division, is a former Vice President in Charge of Research and Development of SAM. Mr. Smiddy's 34-year business career has included partnership in the well-known management consulting firm of Booz, Allen, Hamilton, and executive service with Electric Bond and Share Company, West Penn Power Company, Ebasco Services, Inc., as well as membership in many leading professional organizations

New Horizons For The Industrial Engineer

by Harold F. Smiddy
Vice-President
Management Consultation Services Division
General Electric Co., New York

This article is a reprint from the 1953 SAM Spring Conference Proceedings. If anything, it is more timely now than when it first appeared. The author, in unvarnished terms, tells what the economic picture holds for today's engineering talent . . . and the picture is good

"NEW Horizons for the Industrial Engineer", as a title, is at once both optimistic and challenging—and intentionally so.

To get off to a provocative start, I'd like to state flatly that there is no insurmountable reason why any competent industrial engineer today should not triple his income in the next five years. Whether he will do so or not is essentially up to him personally and will be a function of his willingness to think boldly and soundly rather than merely to wish and wait.

The point is that such a result is there to achieve, for basic and fundamental reasons which I will outline, if industrial engineers will have the imagination and the courage to reach out for it through persistent and thoughtful application of the skills they have at their command.

To bring out the logic of this challenge, let me make the following seven points—to show that each is factually accurate—and in turn thus to demonstrate that the opportunity both to multiply his income and to broaden greatly his service to our complex industrial society is begging for the taking before each technically trained engineer of this age.

1. Advancing science and technology comprise one of the major factors fixing the nature of our society and the problems of organizing and managing its constituent institutions today.

2. The impact of such scientific and engineering developments, and of the power over materials and equipment which they bring, requires corresponding creative thought and effort to keep social progress and human relations abreast of technical progress.

3. The necessity to organize and to manage the business and other basic institutions of our increasingly mechanized civilization competently calls peculiarly for the kind of skill our engineers—and specifically our industrial engineers—possess.

4. The industrial engineer who is awake to these potentials has his choice of participating in the realization of two equally challenging fields of service; either by better individual creative performance in the field of industrial engineering as such, or by direct participation in the sphere of management in which results are achieved by leadership in planning, organizing, integrating and measuring the activities and performance of fellow workers, rather than by personal productive output.

5. The needs, challenges, and rewards for contributions for better technical industrial engineering effort are especially clear at this time.

6. Similarly, the industrial engineer who desires to do so has special qualifications and opportunities to transfer from technical to managerial work under these conditions.

7. The only missing ingredient to retard climbing either of these beckoning paths to greater performance, service, recognition, and income is the will of the individual engineer himself. Therefore, any competent industrial engineer today can triple his income in the next five years *if he will move sincerely and intelligently to do so.*

Let's look for a moment at each of these seven points and explore both their validity and the logic of the conclusion which flows from their cumulative potential.

It is hardly essential to labor the idea that science and technology represent dominant forces shaping today's Industrial Society, but let me mention only three items to make the record clear in this respect.

First, let me relate an experience I had while trying to write another paper a few months ago. The 10th International Congress of CIOS, the International Committee for Scientific Management, will be held in Sao Paulo, Brazil, in February 1954—and incidentally I should like to see a large and representative group at that outstanding event. The sixth of eight technical sessions there is a program built around the broad theme of "The Leadership Role of Management" and will deal with the subject, "Policy Making as Affected by Conditions Outside the Control of Management; Particularly Those Related to Credit (Finance) and Taxation," under the lead of the French national management organization.

The French, in outlining this topic, suggested that credit and taxation might be the dominant external influences. However, in preparing the United States collaborating material for this topic, we surveyed some 83 American leaders in business, education, and government; and it early became apparent that credit and taxation, important as they are, represent only symptoms of deeper causative factors that really require understanding in policy-making today.

Such research showed, instead, that there were four true primary factors: (1) multiplying technology, (2) competition, (3) big government, and (4) individual and collective public opinion.

It is striking to note that "multiplying technology" headed this list. For further confirmation of this point I would recommend Fenton Turck's brilliant article, "The American Explosion," published in the *Scientific Monthly* for September 1952, which Fred Rudge quoted so effectively in his talk on "Fundamentals of Getting Work Done Through Others" at the SAM Fall Conference in October 1952.

We Are Living At The Peak Of A Cultural Revolution

I should like also to refer to the powerful Calvin Rich Memorial Lecture which Colonel Lyndall Urwick delivered so eloquently at the Chicago Centennial of Engineering in September 1952, and which was reprinted in full in the December 1952 issue of *Advanced Management*. As he said:

> "In little more than 250 years, the scientific curiosity released by the Renaissance has resulted in a major cultural revolution. Man has acquired a control over his material environment quite unprecedented in the history of the human race. . . .
>
> "For a very simple reason: This new-fangled power over material things, these gifts which engineering above every other profession has placed within our reach, are not unconditional. The price of power is understanding, the insight to use it right. As every engineer knows, a culture dependent on power-driven machinery has its own postulates. Above all, the proper, the effective use of modern machinery demands of men an intricacy of cooperation, a refinement of social discipline, such as they have never before contemplated. All around us is the evidence of this truth."

Men And Machines—And A Theory Of Communication

And third and finally, regarding point one of my seven points, I heartily recommend the study of pamphlet, *Cybernetics and Society*, summarizing the proceedings of an historic meeting of the New York SAM Chapter on that subject on November 16, 1950. This pamphlet is a compilation of profound remarks that evening by Norbert Wiener, Luther Gulick, Alex Rathe, Carl Heyel, Al Seares, and Victor Dorkovich, who posed frankly the import, for both industrial engineers and for managers, of the "Second Industrial Revolution".

As Wiener himself then boiled it down: "As to the things that I see in the immediate future . . . the machine, its repercussion on society, the human attitudes that we must take, the fact that we must not worship the machine . . . please notice that the theory of communication and of organization is principally one applying to the living organism, as well as to the machine."

Wiener further significantly noted that one ultimate result of the degree of automation of both manual *and mental* work that is *already in being* is to indicate the potential displacement of workers "That we never do employ again;" and that in handling the social-political responsibilities so imposed, there is a transcending problem for economic and for political and social statesmen alike to recognize that, in the face of changes so radical, "the statesmanship of management cannot stop at the edge of the individual firm."

It is indisputable, therefore, that advancing science and technology—which engineers understand and direct—do go far to fix the nature of our society and the problems of organizing and managing its constituent institutions.

That the impact of such scientific and engineering developments, and of the power of materials and equipment which they bring, requires corresponding creative thought and effort to keep social progress and human relations abreast of technical progress seems to me another uncontrovertible point.

The remarks of Colonel Urwick and of Dr. Wiener, previously quoted, are as pertinent here as with respect to point one. If further evidence seems requisite, even casual perusal of the program topics for practically any management or industrial association conference these days will more than provide it. Growing awareness of this urgent need is indeed one hopeful sign that the chance to meet it—and in time—is still ours.

Engineering skills are necessary in organizing and managing business and other basic institutions today fundamentally because both *technical* knowledge and a *professional* attitude in its application are root requirements of our increasingly mechanized civilization, and the good engineer has both.

The important connotation, though, is that such knowledge and such attitude

CHAPTER MEMBERSHIP STANDINGS
September 1, 1954

New York	409	Hartford	64
Northern N. J.	381	Reading	64
Philadelphia	319	Wilmington	62
Cincinnati	306	Providence	61
Chicago	275	Columbus	60
Cleveland	269	Central Penn.	59
Pittsburgh	241	Lehigh Valley	59
Lancaster	214	Charlotte	58
Deiroit	205	St. Louis	55
Boston	204	Alabama	54
Washington	201	Bridgeport	54
Milwaukee	151	Clearing	51
Los Angeles	145	Knoxville	51
San Francisco	143	Western Mass.	49
Worcester	141	Calumet	47
Dallas	128	Central N. Y.	44
Western N. C.	113	Greenville	44
Raritan Valley	109	Sacramento	43
Indianapolis	102	Manchester	39
Kansas City	101	Twin City	39
Hudson Valley	98	Fox Valley	37
Baltimore	95	New Orleans	37
New Haven	92	Louisville	34
Montreal	91	Madison	33
Greensboro	87	Portland	31
Binghamton	84	Nashville	29
Dayton	83	Wilkes-Barre	26
Atlanta	69	Stamford	20
Richmond	69	Non-Chapter	100
Trenton	68	Non-Resident	82

are as important for the manager as for the engineer in developing and operating our complex enterprises in the paradoxical niche which they now occupy in our economy and society—paradoxical because, on the one hand, society recognizes its deep need for their services for its progress but, on the other hand, it demands uncompromisingly that their contributions be fairly in the public interest at all times as the price of giving them the challenge and the chance to render their services on a basis profitable enough to allow and encourage needed efficiency and expansion.

More, of course, than his colleagues in any other functional field of work, the engineer—either as individual, creative designer or as manager—not only understands but actually creates the technical background for such operations and progress. Every engineer naturally takes this for granted.

Management Men Become Increasingly "Professional"

Many engineers, however—and there are too many industrial engineers among them—pass over too lightly the significance of the *professional* characteristics of engineering education and of technical experience and qualifications. The gist of it is that in these modern industrial businesses in which engineers work, or for which, as educators, they prepare young men, or which, as government officials they analyze and even regulate, the work of management itself has now become "professional" to an ever increasing degree.

Hence, industrial engineers, with a "built-in"—so to speak—understanding of the obligations involved in bringing a truly professional attitude and approach to the day's work, have a distinct edge if they elect a managerial rather than a technical path. This is because they not only understand technology but also appreciate the service, spirit, and calls of the "professional" requirements with which all managers must struggle today.

Therefore, draw only the obvious conclusion from this prevailing state of affairs—namely that an industrial engineer, awake to such potentials, has a double chance for personal progress and success. He can, as I have labored to demonstrate, travel either the path of better personal, creative, technical performance or that of personal advancement as a manager, who guides the successful and profitable use of both the human and material resources of a business—or other useful institution—towards its planned objectives.

No Limit On Opportunities In Management Field

This deals directly with an engineer's opportunities if he decides, as an individual, to travel the first path, that is, to strive as a personal, creative technical engineer.

In a way it may be presumptuous for a mere electrical engineer like myself to try and prove to industrial engineers that there is no sensible limit visible on the opportunities in the other field—management—in the years foreseeably before us.

Perhaps, however, in my capacity as the current head of SAM's Management Research and Development Division, I may be bold enough to do so, since I can then quote specific experts in the field of industrial engineering as such, whose words will carry weight.

For brevity, I shall restrict myself to one such authority—both because he is eminent in his own right and because, as Chairman of the Society's Committee on Professional Industrial Engineering Standards, he is the voice also of all the nationally, and even internationally, famous leaders who have contributed to that work.

I refer to Dr. Marvin E. Mundel, who is well known both through his long service at Purdue University and now recently as Director, Ordnance Corps Management Engineering Training Program, at the Rock Island Arsenal.

Dr. Mundel's article, "Developing Industrial Engineering Curricula," in the December 1952 issue of *Advanced Management*, stresses the "need for more adequate university training of industrial engineers." In it he makes two basic statements that bring out the scope of the opportunities which I am depicting in my fifth point:

1. "At the present time, the engineering educational system finds itself in the rather unique position of producing a great many less graduates than are required to even begin to meet industrial demands . . . However, the question still frequently arises as to whether there is such a field as 'Industrial Engineering'! The re-emergence of this question in many quarters is one effect of the present huge demand for engineers which has tended to reduce, to some extent, the feasibility of, or any pressing need for any specificity of demand or need."
2. "It seems only fair to suggest that the present national concentration on production, as well as the continued need for production if we as a people are to progress, points to a need for more adequate training in Industrial Engineering than is presently available. Indeed, a considerable amount of the science needs to be developed, but of what other branch of engineering is this not also true?"

In the rest of this same article Dr. Mundel both defines the basic scope and nature of industrial engineering work and also—by stressing the need for better educational curricula across the whole field involved—clearly emphasizes the wide opportunities for those in this work. His closing words rightly note that "it will certainly take careful administration and encouragement to assist Industrial Engineering education into achieving the growth that our national economy demands."

Similarly, as Chairman of the SAM Committee on Professional Industrial Engineering Standards, Dr. Mundel and the other eminent members of that Committee are rapidly developing sound classifications of both the types and areas of activity embraced in the work of industrial engineering as such.

Better Performance Needed In Industrial Engineering

Merely to call the roll of the sub-areas of activity which they have already listed is to make clear the terrific scope open for creative personal contribution in such basic areas as methods; time and programing; controls; manpower utilization, organization and compensation; and surveys as to facilities, functions, and performance throughout all industry and related activities.

Thus, to summarize point five, there are not *enough* industrial engineers on the one hand; and there is overwhelming need for better performance as to all aspects of industrial engineering on the other hand.

Let me name only a few of the areas in which opportunity is begging for attention:

1. Operations research, and the development of better statistical and scientific methods pertinent thereto, for every functional kind of work in

industry, including engineering, manufacturing, marketing, finance, and human relations.

2. Improved and refined techniques in time and motion study—and especially in predetermination of time standards for elemental motions and in all the possibilities for work simplification in all fields of human, physical and mental endeavor which this technique opens up.

3. Application of the principles of industrial engineering to problems of distribution, whose costs equal or exceed those of production in our economy as a whole, and whose difficulties of analysis and control have all the varieties of shop costs plus the added complexities due to geographical dispersion of the work.

4. Application of technical principles and methods of orientation to the social as well as the physical sciences.

Clearly, industrial engineers, can hardly claim that it is lack of opportunity which holds them back.

To Move Or Not To Move—From Technical To Managerial

As already emphasized, whether to move over from technical to managerial work is a personal choice. There are outstanding chances for talent in either field. I have tried to point out the advantages of personal engineering efforts in my discussion above of point five. The point here is that equally wide and remunerative openings prevail for those who elect the path of progress through management work as such.

"Managing", as a distinct and as a professional type of work itself, may be simplified for the purposes of this analysis as leadership through planning, organizing, integrating, and measuring the use of available human and material resources of an enterprise to achieve chosen optimum objectives well, economically, profitably, and on time.

The separate and professional work of "managing", under this concept, involves exercise of responsibility, with commensurate authority, to make decisions, to take action, or to recommend decisions or actions to others, as the means of achieving optimum results.

Both, because of industrial engineers' "built-in" professional attitude and because of their trained understanding of technology and its implications, it is plain that those among them who are so inclined should have a highly preferred status in competing for the expanding and ever-more-complex jobs for which competent managerial talent is being sought on all sides.

The shortage of able managers is, if anything, even more acute than the shortage of engineers and is steadily worsening.

That, of course, is the underlying stimulant of the gargantuan spate of both real and ersatz "manager development programs" which are receiving such spectacular publicity in all kinds of management and industrial enterprises, circles, and associations at this time. They do indeed represent something of a transient phenomenon of our day, which would well justify a full-length article in themselves. Suffice it to say, for my purposes here, that irrespective of the validity, or lack of it, of any particular such scheme, their very existence cumulatively proves beyond dispute the reality of the manager shortage which they aim to relieve.

As in the strictly technical field, therefore, opportunity literally clutches at industrial engineers who are willing to fit themselves for the task, to triple their income along the path of professional management work in the years immediately ahead.

for the Industrial Engineer with a genuine interest in the growth of his field and in his own professional development . . .

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Opportunity Unlimited—If You Have The "Missing Ingredient"

Let me repeat, consequently, that the only "missing ingredient" to retard climbing either of these beckoning paths to greater performance, service, recognition, and income is the will of the individual industrial engineer himself.

In the 1940 *Annual Report* of the National Industrial Conference Board, Virgil Jordan wrote a phrase that I have liked to quote ever since. After a brilliant and penetrating analysis of the forces then plaguing the world going to global war, and after contrasting the totalitarian and the free enterprise philosophies, he said that the essence of our American philosophy can be fairly put in six short words: "Discover how and do it yourself!"

There can be no more succinct way to tell industrial engineers of the confidence and of the responsibility which management reposes in them at this time than to say, again: "Discover how and do it yourself!"

Self-development has always been the key to basic personal progress.

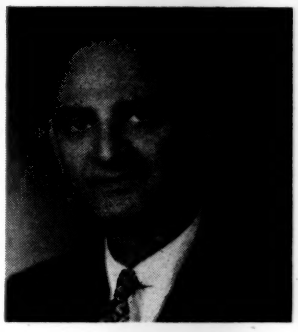
The horizons of this country are still pushing out in every field of technical and managerial endeavor—and at accelerating rates, as can be demonstrated quantitatively by even the simplest factual analysis.

Their technical training and their professional background give industrial engineers unique chances to go ahead under these conditions—no matter which of the two potential paths I have described they choose.

If the industrial engineer is, personally, ambitious and alert to these significant characteristics of his day and surroundings—if he personally has or can rouse that divine spark of discontent which ignites in him the urge to leadership and progress, then the sky's the limit in his future.

"New Horizons for Industrial Engineers"—as engineers or as managers—stare us in the face in literally every direction. My question is: will they get on their horse and start to catch up with them in time? END

V. HENRY ROTHSCHILD is a member of the Bar Association of the City of New York, the American Bar Association, and the Federal Bar Association as well as the Bankers Club of America. In his legal career he has specialized in corporate and tax work, has operated independently in general legal practice. From 1951 through March, 1952, he served the United States government Salary Stabilization Board in various legal capacities



Small Business Compensation And Incentive Plans

by V. Henry Rothschild
Former Chief Counsel
Salary Stabilization Board

Pension plans for business executives have for some time been under attack from some quarters. Chiefly they have been accused of being unfair to company stockholders. Here a distinguished authority describes in complete detail how a company made supplementary compensation available to an incoming, highly necessary executive, tells why it did so, and shows how both executive and stockholders profit from such plans

OVER the years the loss in the dollar's purchasing power has affected every one with a fixed or earned income, but has perhaps affected executives more drastically than any other group of employees. This is because salary increases, whether to reward ability or years of service or to make up for loss in purchasing power through inflation, result in progressively higher rates of federal income tax, and it has not been feasible to grant executives in the higher salary brackets the huge salary increases needed to keep their salaries abreast of the increased cost of living. In lieu of such salary increases, supplemental compensation plans and incentives have become popular.

Such forms of compensation are often considered simply a method of avoiding or minimizing taxes. They have been the subject of criticism as an improper use of corporate funds and an impairment of stockholder rights. One popular columnist has written a series of columns attacking "the greedy executive pension racket, the stock-option racket and other grabs of money which should belong to the individual owners of corporation stocks." He has suggested that there is something improper and even immoral in the use of such plans and has called for remedial legislation. Supplemental compensation plans have been attacked at stockholders' meetings, have been made the subject of proxy fights sometimes resulting in the overthrow of existing management by insurgent stockholder groups, and have recently been the subject of extensive litigation.

There is no doubt that such plans have been used indiscriminately and in an ill-considered and ill-advised manner by a number of companies. On the other hand, there can also be no doubt that, when properly adapted to specific circumstances, such plans can be very useful and can accomplish significant business objectives wholly apart from the minimization of taxes that they may bring about. Moreover, as against the attraction of substantial pension rights and all-round security offered by most of our great industrial corporations today, supplemental compensation plans and incentives may sometimes offer the sole method through which the smaller company can hope to attract and retain capable management.

The following case study, which the writer from his experience believes typical, is based upon an actual case, with fictitious names and identifying facts and figures slightly altered.

The president of Standard Dynamics, Inc., had been killed in an airplane accident, and the company's board of directors was looking for a new chief executive. The company, a small, growing enterprise with stock traded across the counter, which manufactured several new electronic products, one of them quite profitable and others potentially so, had an excellent engineering and technical staff and, independently of the Korean crisis, had a substantial volume of business with the Government which was paying for valuable research from which the company would eventually benefit.

Prior to the death of its president, the company had done fairly well, but for the past couple of years it had been losing money at a progressively greater rate. No one in the company's employ was considered of presidential caliber and the board had installed a banker, a connection of one of the directors, upon the theory that, with effective financial guidance, the company's technical operations could again be made to show a profit. The decision proved wrong, and the board had come to the conclusion

that it would be necessary to find a chief executive for the company who was both an engineer experienced in the manufacture of electronic products and a hard-boiled businessman with an eye to costs—a difficult combination to find. The only alternative was to accept an offer by one of the company's large competitors to buy its assets at what the board considered a low figure.

An Incentive Had To Be Offered

The company's board was now sure that the right man for the job had been found. The man in question was a young executive in his late thirties named Hanna, who was in charge of a division of one of our great manufacturers of electrical and electronic equipment. Hanna had been to see the Standard company's plant, had talked with several directors and members of the company's staff and was definitely interested. The problem was to find an arrangement sufficiently attractive to induce him to sever his relationship with his employer.

Hanna was earning slightly over $25,000 a year—on the low side for the type of job he held. However, he was in line for a vice-presidency within a few years and an annual salary of at least $40,000, or so he said. Whether or not Hanna's statement as to his future was optimistic or wishful thinking, it had to be assumed to be true, since Hanna was in the driver's seat insofar as negotiations and bargaining were concerned. Moreover, Hanna had been with his company for over ten years and had built a substantial equity in a pension fund. Standard Dynamics had no pension plan and could not afford one for the time being.

Standard Dynamic had initially offered Hanna a salary of $40,000 a year plus a profit-sharing arrangement which, with any real improvement in the company's operations, might bring his total compensation to $50,000, or almost twice what he had been earning. Hanna had turned this down. Apparently, the difference after taxes between the compensation offered by Standard Dynamics and his present compensation was not a sufficient inducement in return for the sacrifice in security that Hanna was being asked to make.

Greater rewards, or at least the opportunity for greater rewards, would have to be offered. Standard's board was endeavoring to ascertain what rewards might properly and legally be offered, taking into consideration the company's financial position. After thoroughly exploring the various categories of compensation and incentives, and the advantages and disadvantages of each, the company finally made Hanna the following offer:

1. *Stock Option.* Experience had led to the conclusion that, without adequate management, Standard might continue to lose money and its stock to lose value. If and to the extent that Hanna could reverse the current trend, improve the company's position and increase the value of its stock, present stockholders should have no proper cause to complain if Hanna were allowed to share in any increased value of the stock that presumably he had helped to create, despite the dilution of the increased value and of the earnings of existing stock that would take place.

It was accordingly decided to offer Hanna an option to buy stock of the company during a specific period of time. The purpose of this option was to give Hanna a stockholder's stake in the company's future, with the opportunity, similar to that enjoyed by other stockholders, of realizing large returns, subject to tax on a capital gain basis, if, as and when the stock increased in value.

Setting A Time Limit On Exercising Of Right To The Option

The period of the option was to be eight years; less than the maximum ten-year period approved by the New York Stock Exchange for options relating to its listed stock and incorporated in the new tax bill as a specific requirement for tax benefits. But Hanna had to exercise the option during employment or within three months after termination of employment at the latest. Hanna was to have the right to exercise the option as to a small block of stock at the end of the first year of employment and to buy increasingly larger blocks on a cumulative basis at the end of each additional year that he stayed with the company during the first five years of his contract. Obviously, the company could not compel Hanna to continue to work for it through an employment contract, and its purpose was to frame the option so as to encourage Hanna to remain with the company. Therefore, both the amount of stock that he could buy and the period during which he could buy it were made dependent upon his continued employment and the length of time that he was employed by Standard.

An Option Price Fair To Both Stockholders And Employee

As to the option price, it was fixed at $5 a share, which was the net price on a per share basis for which Standard's competitor had offered to buy the company's assets. This $5 price was slightly above the book value of the stock and approximately the mean between bid and asked prices over a period of time. A higher option price was not considered fair to Hanna in view of the current earnings picture. A lower price was not considered fair to Standard's stockholders.

2. *Retirement Benefits.* Hanna was being asked to give up future security based on fixed payments for which his company was currently putting aside the funds as the obligation was incurred. Standard was in no position to make up to Hanna for his loss of pension rights. Standard could not even promise to adopt a formal pension plan for a large enough group of employees to permit funding of the plan on a tax-favored basis.

Instead, Hanna was offered a contract giving him future payments a good deal larger than those he would receive from his company, but such payments were to be in large part contingent upon the success of Standard's future operations and the length of time Hanna remained in Standard's employ. These objectives

SCHEDULE OF NATIONAL MEETINGS—1954-55

October 30, 1954	Board of Directors
February 12, 1955	Executive Committee
April 30, 1955	Board of Directors
May 28, 1955	Executive Committee
June 25, 1955	Board of Directors

were accomplished in the following manner:

(a) Standard offered Hanna an annual salary of $35,000, instead of the $40,000 originally discussed, and a more generous profit-sharing arrangement than that originally proposed. But Hanna's share of the profits were to be paid to him only if he stayed with the company for at least five years. If he did stay with the company for five years, his share of the profits would be paid to him in annual installments commencing on his retirement or on the termination of his employment, whichever first occurred.

(b) In addition to the profit-sharing arrangement, Standard agreed that for every year that Hanna worked for the company, it would pay him the sum of $5,000 a year on his retirement or on the termination of his employment if he had been employed by the company for at least five years. Thus, if Hanna worked for Standard for five years, he would then be entitled to receive $5,000 a year for five years, plus annual installments for any share of profits under the profit-sharing arrangement mentioned above that might have been earned. These future payments, together with the profit-sharing payments, could be forfeited if Hanna set up in any business competitive with Standard after termination of his employment, or disclosed confidential processes or trade secrets or took other action hostile to the company's interests.

It should be observed that these payments represented more than retirement benefits since they were to commence, provided Hanna had been with the company for five years, on termination of employment for any reason. To Hanna these payments could therefore represent a future source of annual income which would be welcome in case, for example, he should in the future wish to go into business for himself, take a long vacation or retire at an early age.

Provision was also made for death benefits for Hanna's widow. The amount of these payments was made contingent upon the number of years that Hanna had been with the company at the time of his death.

3. *Group Insurance.* Standard agreed to take out term life insurance under which Hanna's life insurance would initially amount to $17,500, later coverage to depend on the amount of his salary. The company also agreed to subscribe for a group hospitalization and medical care policy which would pay for $2500 of medical costs per sickness or accident, plus cash benefits during incapacity. Hanna was to pay a relatively nominal share of the premiums for both types of protection, with the company paying the balance. The insurance protection which Hanna thus secured was tailored to his particular needs as well as those of other employees of Standard, represented a considerable improvement over the insurance protection offered by Hanna's own company, and would have cost Hanna a great deal more if subscribed for by him on an individual rather than a group basis.

4. *Expense Arrangements.* So that Hanna would suffer no out-of-pocket loss through his change in jobs, Standard agreed to pay Hanna for the cost of moving his residence near the place of his new employment and also offered to finance the purchase of a new home for him. These provisions were worth many after-tax dollars to Hanna.

Likewise with a view to making the transition in employment cost-free to Hanna, the company agreed to pay the fees in connection with the preparation of his employment contract.

For prestige purposes, a company-owned automobile plus chauffeur was to be made available to Hanna for use in the company's business. Finally, the company agreed to pay Hanna's dues in a country club used by the company for both business purposes and as a recreational facility for its employees.

This combination of benefits and incentives offered Hanna, in exchange for security, an opportunity for large payments contingent on the company's success and Hanna's success with the company. Unless and until there were profits, the total of all benefits offered by the company would cost the company less than the higher cash compensation originally offered and rejected. Even with profits the company would retain the use of cash at a time when it most needed cash in its operations, since Hanna's share of the profits were not to be paid to him immediately. Of course this package would produce important tax advantages for both the company and Hanna. But the purely business motivations and objectives of the agreement, and its propriety insofar as executive, company and stockholders were concerned, seem self-evident.

Only through a combination of benefits such as those outlined can the smaller company to-day attract or retain capable management as against its larger competitors. END

How Industry Is Using SAM Rating Films . . .

- **Reduce time, cost of time study training**
- **Select trainable applicants at Personnel**
- **Strengthen union's confidence in time study**
- **Reduce, expedite grievances**
- **Increase rating skill and consistency**
- **Build standard data**
- **Derive predetermined times**
- **Set new standards, audit old ones**
- **Explain philosophy of time study technique**
- **Help company make its own films**

These two Industrial Engineers have had extensive experience—and success—with clinics and conferences. This clear and concise outline of their method of operation was published previously in the April 1952 issue of ADVANCED MANAGEMENT. We reprint it now in the believe that the many new members who have joined the Society since that time will enjoy and benefit by their findings.

It's Fun To Run A Chapter Conference

by Peter C. Dinos and Paul J. MacCutcheon Industrial Engineers

THERE ARE numerous reasons for having your Chapter sponsor a Clinic or Conference. Here are a few:

1. As a genuine service to the members and the area your Chapter serves.
2. To secure new members.
3. To earn money for the Chapter.
4. To spend your Chapter's money.

Organizing and running a Conference is excellent experience. It can be fun, too. We all enjoy success, and you can be successful at this if you will organize, plan, and follow through. The following notes, selected from our experience, may be helpful.

The Theme: Once you have decided on a reason, start lining up your speaker or speakers. The bigger the name the bigger the audience. A speaker whose name is immediately associated with time study, methods, synthetic time values, or labor relations, could be a magnet.

Make initial contact with the speaker at least five months before Conference time. This will allow time for contacting other potential speakers if your initial mainliner is not available. In any event, allow a minimum of three months for making all arrangements supplementary to getting speakers. If you cannot work this far ahead you are risking a failure!

Publicity: Success or failure depends upon the interest you can create. Interest is created by: Direct Mail, Publications, Personal Contacts.

Direct Mail: Most of the people will be attracted to the Conference by means of direct mail. For this reason your mailing pieces must contain all possible information. A tear-off coupon for registering in advance is usually a part of the mailing piece. A good-sized print shop—not a small job shop—can give invaluable help in laying out your mailing pieces. A reputable printer will charge no more than the going price for this aid and also will assure you of a professional looking job. Most small job shops use the same worn type over and over and have a narrow choice of type styles. This can result in a fuzzy looking job with unrelated type styles. Insist on preliminary proofs and don't o.k. the press run until you are completely satisfied.

Since the mailing will be bulk mailing of identical pieces, you will save many dollars by obtaining a postal permit for mailing these identical pieces under Postal Laws Section 34.66. This Section permits you to mail identical pieces in bulk volume of 200 or more at a cost of 1¢ per piece. The mailing can be done by affixing pre-canceled 1¢ stamps, postage meter imprint or a printed postage insignia. Although the postal permit will cost ten dollars, several times this amount may be saved through its use. Your local postmaster will be glad to supply you with additional details.

Publications: Two avenues of free publicity are yours for the asking: trade journals and local newspapers. The announcement of the Conference should be double spaced on 8½" x 11" paper and have ample margins. Have it written by someone able to do a skillful and professional job of writing a news release. Editors chop a news item from the bottom up, i.e., as space permits they print what they can of your announcement, paragraph by paragraph. They may have to leave out the last paragraph, the next to the last paragraph and so on, depending on space available. Therefore, be sure to get the what, who and where of your announcement completed by the first or second paragraphs.

A list of trade magazines and newspapers is available in Ayer's Newspaper Directory or the Editor and Publishers Year Book. Either of these is available at a fair-sized library.

Personal Contacts: The personal touch succeeds where nothing else does. A phone call to a key man in a plant can possibly assure you of several additional people to attend the Conference. A persuasive talker on the phone may mean the difference between success and failure of your venture.

Have A Budget: Rough out your anticipated major fixed and variable expenses. Decide what your Conference fee will be. Warning: Don't set it too low! You should have a break-even point well below the maximum attendance you can handle. Set a date—perhaps two weeks before the Conference date—at which you will review the total of paid registrations. Something might

go sour, and there are situations where it would be wiser to cancel a Conference than risk heavy losses. Of course, if you have done everything else properly, the chances are you won't even have to consider such an unhappy possibility.

Speakers' Fees: Payment to the speakers usually follows one of these patterns:

a. Fixed fee—no extra charges.

b. Travel and accommodation expenses only.

c. Travel and accommodation expenses plus a fixed fee per guest. (The speaker usually distributes manuals, booklets, or work material to each guest at no additional charge.)

Printing and Mailing Costs: An 8½" x 11" announcement on 60 lb. stock, printed in one color on both sides will cost about $60.00 for the first 1,000 copies. $20.00 for each additional 1,000. Approximately $7.00 per 1,000 names. Using postal permit—$10.00 per thousand. Miscellaneous — name cards, luncheon tickets, etc.—$10.00.

Good Food And Pleasant Surroundings Important

Food and Meeting Place Accommodations: A well-known hotel is the best place to conduct your Conference. Large hotels are well staffed and capable of quickly setting up the needed chairs, tables, platforms, reception accommodations, etc. The average hotel will charge a fixed amount per luncheon plate. The use of the meeting room, furniture, and equipment will be free. However, a guarantee of a minimum number of luncheons is usually requested by the hotel.

Reception: People will have to be greeted. This means provisions for registration at the entrance to the meeting room. If a crowd of 200 is expected you will need more than one registration desk. The hotel will provide whatever tables and chairs are needed at the entrance to the meeting room. The following arrangement has worked well where most registrations were paid in advance. Set up 5 desks, each manned by one person:

1. Paid registrations—A to L
2. Paid registrations—M to Z

At each of these two desks prepared name cards should be ready for distribution together with the luncheon tickets and supplies tickets.

3. Unpaid registrations

This third desk will take care of those people who have not submitted advance registrations or who have delayed payment. A typewriter is needed at this desk to fill out the name cards for these late comers.

4. *Supplies:* To avoid confusion a separate table is desirable from which to distribute any supplies the registrants need for the conference. It is advisable to locate this table a short distance away from the registrants' desk to prevent congestion.

5. *Information:* No matter how well you plan your Conference there will always be on-the-spot decisions to make. Some registrants will want to stay for only half the Conference and give their rights for the other half to another person. Others will have sent in money which has not yet been received. Depending on the nature of the Conference, the Government may send some representatives. Each of these representatives will have the usual myriad forms in triplicate that have to be signed before the Government will pay the Conference fee. These and other on-the-spot decisions will have to be made by the man at the Information desk. It is best to have a man at this desk who has been in on the Conference arrangements right from the beginning.

The Meeting: Courtesy to speakers should be self-evident. Yet many a lament we've heard from prominent men about S.A.M. Chapters who've asked them to speak, then failed to meet them, failed to get them a hotel room, failed to make them feel at home. And failed to make a friend, we might add. If you will take the viewpoint that, regardless of financial arrangements, your speaker is doing you a real favor, you can hardly go wrong.

Assist Speakers In Every Possible Way

The speaker will need lots of background help to assure a successful Conference. Be sure to ask him to submit a list of equipment he will need at least 2 months before meeting time. This will give you adequate time to line up the equipment and one or two people to assist him. Here's a partial checklist for equipment:

Lectern
Platform
Blackboard
Sound Projector
Silent Projector
Slide Projector (make and size)
Table
Power Cable
Means to darken room
Switch location
Chair arrangement

Leave Nothing To Chance: Nothing should be left to chance. The hotel should know your plans and your needs—in detail. Draw up a timetable and stick to it. Often an evening affair, very profitable to the hotel, will follow your daytime Conference. There is no quicker way to lose the goodwill of a hotel than to hold up the often extensive preparations they must make for the next event.

The luncheons provide an opportunity to publicly thank all the behind-the-scenes people who had a part in bringing the Conference together. It's customary to seat these people at the speaker's table. And don't forget that these luncheons provide an excellent excuse for a short talk to non-members on the advantages of their joining your S.A.M. Chapter.

Summary: Keystone of a successful Conference is *careful planning.* This means:

Organizing a logical division of duties.

Defining these duties in *writing.*

Making sure the *doers* understand their duties.

Painstaking follow-up of major plans and minute details alike.

Here is a timetable to guide you in your Conference Planning. All dates are before "C" day:

5 months—Birth of the idea. Contact potential speakers.

3 months—Speaker selected. Behind-the-scenes people appointed for publicity, reception and speaker's helpers. Hotel arrangements.

2 months—Speaker's equipment. Releases to trade magazines. Get mailing announcements printed. Develop a mailing list.

3 weeks—Releases to local newspapers. Mail announcements.

1 week—Second releases to local newspapers. Phone calls to key people who have not submitted reservations.

1 day—Dry run at hotel with necessary equipment.

"C" day—Have fun. END

Turn to the next page for an outline of the method used by SAM National Office in conducting a Conference.

The following steps are those used by SAM National Office in conducting a conference:

1. The selection and development of the conferences theme and areas of discussion;
2. The procurement of qualified speakers and discussion leaders;
3. The preparation and distribution of advanced notices and publicity releases;
4. Financial accounting of conference expenditures from a budget previously authorized by the Executive Director;
5. The handling of routine operations in preparing for and staging a conference.

The Director of Conferences' over-all schedule of activity and the time-tabling of specific developments are planned in consultation with the Executive Director. Normally, the introductory announcement (flyer) of a conference is ready for mailing no later than 65 days prior to the event; the final program no later than 32 days.

The Conference Theme And How To Choose It

1. On the basis of current or future major needs of Management, formulate the theme of a conference and decide on the specific areas of discussion.
2. Contact and procure qualified speakers and sessions chairmen.
3. Lay out the conference program and arrange a schedule for finalizing each area of the program.

Announcements and Publicity

1. Prepare and distribute, on a scheduled basis, advanced announcements, as well as local and national publicity, concerning the conference program and the individuals participating.
2. Prepare and distribute the conference program.
3. Secure from each speaker and sessions chairman a glossy print photograph, together with a biographical account, for publicity purposes. Secure from each speaker a four-paragraph synopsis of his talk for the purpose both of providing the sessions chairman with introductory material and furnishing a talk abstract for the program.
4. Secure copies of the full speeches at least 15 days before the conference in order to (a) have mimeographed copies available for distribution to the press during the conference, (b) facilitate preparation of the Proceedings by the Publication Department of the National Office. If a written transcript of a speaker's talk is not obtainable prior to the conference, arrange for reporting service during the session.

Routine Operational Mechanics

1. Arrange with the hotel for conference rooms, registration areas, press room, message desk, publications display room, Chapter Officers Lounge, University Chapters Lounge, and meals.
2. Order required conference materials and supplies such as tickets, badges, badge holders, notebooks, signs and placards, and flowers.
3. Arrange for the packing of required materials and equipment to be moved from the National Office, and used at the conference. Provide for their custody and return.
4. Arrange for ushers and guards to serve during the conference.
5. Arrange for trucking services, Conference Bureau help, rental of special typewriters, and procurement of specially required equipment such as projectors, Vu-Graphs, microphones, etc.
6. Arrange and supervise registration mechanics prior to the conference; receipt of registrations, cross-reference files, typing of badges, mailing of tickets and maintenance of a running count of registration.
7. Arrange and supervise registration mechanics and the handling of advanced registration during the conference.
8. Provide for the handling, custody and deposit of money received from registrations and the purchase of publications during the conference.

Don't Overlook Important If Small Miscellaneous Items

1. Greet special guests and speakers, thank speakers and chairmen, personally and by mail.
2. Prepare invitations to the head table at the various luncheon and dinner sessions. Make up place cards, prepare head table lists to be used in introduction by the luncheon or dinner chairmen.
3. Send complimentary tickets to the speakers and chairmen.
4. Maintain close check on the start and finish of sessions in order to insure a smoothly running conference.
5. Have personnel available at all times during the conference to direct or assist in the handling of emergencies.

END

How Obsolete Are We?

The automatic factory, so much more complicated than any less mechanized industrial organization, demands managerial personnel who recognize their social responsibilities as well as their economic responsibilities. Today progressive management thinking denies that man himself is becoming obsolete wherever the machine supersedes him in the routine performance of routine tasks.

Behind this evaluation of the future of the machine lies an evaluation of man which, in my mind, is the sin against the Holy Ghost. Routine tasks lose all significance except in so far as they accomplish something for mankind: the railroad and steamboat exist to transport man and the materials necessary for his subsistence, the cotton field and textile factory to enable him to cover and shelter himself, the grist mill and wheat field to keep him from hunger.

Those who value man not in his own right but merely as an instrument for production see eye to eye with the slave merchant and the Egyptian gentleman who squandered at Monte Carlo the moneys earned by his fellahin in the sweat of his brow. This evaluation of man is that of Fascism, of the attitude that I am one of the privileged élite, and that the common man exists for nothing but aggrandizement of this élite. Those who devaluate man in the presence of the superior efficiency of the machine are simply those who have already devaluated man in their own hearts, and their works speak for them . . . from THE FUTURE OF AUTOMATIC MACHINERY, *by Norbert Weiner in* MECHANICAL ENGINEERING.

WELDON T. ELLIS, Jr., left Harvard in 1933 to go to work for the Nashville City Planning Commission as a site planner. In 1936 he joined the Tennessee State Planning Commission and remained in that state's government until 1942 when he went to the U. S. Bureau of Budget. Since 1949 Mr. Ellis has been Department Director of the Office of Civil Defense Planning

Are You Interested In Advancement?

by Weldon T. Ellis, Jr.,
Department Director
Office of Civil Defense Planning

Before a management man can plan for other employees of his company, he must be able to plan for himself. Many management men give lip service to advancement, says this author, without knowing how to advance themselves. Here is an analysis of self-advancement in the genuine sense of improvement, to serve technically competent production by study of one's own present and potential growth

THE RIGHT to advance or to improve our lot is part and parcel of our American heritage. The desire for freedom to make the most of opportunities played a major role in bringing our forefathers to this country. They were not happy with their lot and were willing to do something about it. How many of us find ourselves in the same relative position today? I am sure there are many who want to advance to a better or more interesting job. But how many can translate this desire into a specific line of action? Going a step further, how many of us can relate this desire to a personal career development plan of our own?

Much of the recent thought and effort in the field of career development has been directed toward what can and should be done for you by management, by the business firm or the governmental agency. The other side of the picture, what can you as an individual do for yourself, is of equal if not greater import. There are many things, big and little, that you can do for yourself. The important thing is to review them as a whole and to weld them into some form of coordinated action.

One obvious step that can be taken is to try to know yourself and what you want to do. What appeals most to you is important. What do you want most: security, contacts, financial return, travel or comfort? What type of work do you prefer? Do details bore you or do you dislike broad generalities? Do you want to specialize or do you want to be the general manager type? Assuming you know your desires and limitations and have decided on the type of work you would like to do there is still the problem of what to do in order to help yourself get ahead.

In order to help oneself, one of the first steps a person must take is to evaluate his current situation to see what is his potential for advancement. Needless to say, that is not easy to do. First, it requires a degree of objectivity or self-honesty that is hard to achieve. Second, there are so many factors over which we have no direct control. There are, however, many factors which we do control and through these we can increase our potentiality for advancement. We can evaluate such factors as our technical competence, the job situation in which we find ourselves, our ability to deal with people, the extent of our personal contacts, and our relative degree of freedom to take advantage of job opportunities. All are susceptible to some degree of control by each of us. The question is, "How do we take a look at our potential for advancement and what can we do about what we find?"

First, let us consider our technical competence. Each position requires a certain degree of competence and knowledge. No person taking a new position should be fully qualified to hold the position. If he is, then there is no challenge or growth potential. When the person has fully comprehended all the facets of his job then he is technically competent. Most of us like to think we are fully qualified to hold our jobs. How many of us can truthfully say that we are reasonably competent to handle everything normally expected of us? Not many of us can say there is no room for improvement. Remember, however, staying on a job too long is as bad as taking one for which we are not qualified. There is only so much you can give to or get from a given job. As long as you feel a sense of gain, be it in the challenge of the problems, the knowledge and experience you gain, the financial return or whatever it is, you

are getting something. The important point is—do you feel you are still progressing, just coasting, or slowing down. If the sense of gain is low, if your interest is lagging, it may well be time to do something about the situation. Don't let a desire to achieve full technical competence hold you in a job to the point of diminishing returns, but be sure you have achieved competence to a degree sufficient to prepare you for a step forward.

Whereas, technical competence is related to our knowledge and ability, the job situation pertains to what we have done on the job. Each job situation offers opportunities to contribute and to learn. The contribution should be not only quantitative but also qualitative. Have you improved matters, simplified procedures, or started doing things that were undone but necessary?

The Degree Of Indispensability Is Important

Have you helped clarify the responsibilities of your job and given others a better understanding of the relationship of your job to others in the organization? There is also the question of degree of indispensebility. No one should try to make himself indispensable in a particular job if he desires promotion to a higher or better one. That means that as we progress up the ladder we should see to it that someone is coming along to step in our shoes as we climb higher. You share in the responsibility for seeing that the position you occupy has been improved and that you can leave without harm to the firm.

Human relations or the ability to work cooperatively is a very important part of our advancement potential. Good human relations open doors to what others are doing—it means a flow of ideas, information, and opportunities that would otherwise not exist. It stems, fundamentally, from a willingness to listen to ideas of the other fellow, to permit him to contribute, and to do your part when your turn comes. It is not just a question of being liked but of both being liked and respected. The ability to get along with others without being a "yes man" is the sign of a maturing personality. The willingness to listen and accept suggestions is one sign of competence. Only a person who is unsure of himself or his ability is unwilling to accept help or resents help from others.

Being able to make and hold personal contacts is closely related to human relations. Every job situation offers opportunities to make friends both within and without the organization for which you work. Personal contacts are like roots in the soil—without them a tree cannot grow—the wider the root spread the taller the tree. Professional contacts can be made through seeking advice of others in related fields of endeavor, through professional societies, and through normal working relations. Just this alone is not adequate, through these contacts job opportunities will normally develop, particularly if a feeling of friendships develop from a professional contact. It is human nature to want to help those whom we like. The desire to help is intensified when it is coupled with a knowledge of the work and ability of the friend.

Financial freedom in the full sense is enjoyed by very few. Everyone can, however, achieve a relative degree of freedom. This can be accomplished by having some money in the bank, by some investments that bring a return, or by outside activities that give additional income. The objective is to have a financial resource over and above the income from your regular job. This gives you a freedom of choice, an ability to gamble on a job that has a high potential for gain but is a low immediate security risk. It also permits you to take a job that has a lower immediate salary or income but a higher possibility for the future. Look upon this financial reserve as an aid to advancement, not as insurance against some disaster that may never occur.

Job Opportunities Can Be Developed By You

The last point is obvious: without job opportunities there is no potential for immediate advancement. Job opportunities can be developed through outside promotion or job seeking. The ideal situation is to develop your potential for advancement to the point that the job seeks you. This clearly puts you in a better bargaining position. Don't overlook the fact that getting ahead may mean some self-promoting if the need arises. But don't forget, job opportunities are only a part of this analysis of your advancement potential. Premature moves, made before you have developed the optimum potential of your present job, can reduce your future potential for advancement. Each step in your career should be considered as a part of your foundation for advancement and handled accordingly.

The Six Points Discussed And How To Rate Them

Now let us see if we can reduce these generalities to some specifics so that you can see where you stand. Below is a listing of the six points discussed above and a means of rating each. The rating system has no particular significance in itself. It does serve two purposes. First, it helps point out your weakest points and second, it gives you a summary picture of where you stand. For convenience sake there is a chart at the end of the listing that can be used to record your ratings. This will provide a quick picture of where you, personally, stand and give you a basis of action for improving your advancement potential. To rate yourself you need no complicated mathematical formulae but you do need to be honest with yourself. Here is how it works:

One other point before you go further. You should rate yourself on one or two previous jobs before trying to rate your present position. Doing so gives you experience in rating and a chance to check the validity of your ratings. You can check the picture given by the ratings against the situation as it actually existed—they should jibe.

1. *Technical Competence*

Don't forget, you are rating your advancement potential against your present job—not against some unknown future offer. You know approximately the minimum amount of technical competence (using technical in a broad sense) expected of a beginner in your job. You also have at least a rough idea of what it takes to be fully competent. If you are below average give yourself a minus. If you are about average mark up a zero, if well above average you deserve a plus.

2. *Job Situation*

Look at your job situation to see if: a) You have contributed to getting the job done better; b) You have really given something to your present job other than the immediate technical competence required, and if, c) There is someone who can take your place without harm to the organization. If you cannot answer yes to more than one make it a minus, if two you get a zero, if three a plus.

3. *Human Relations*

Divide your business associates into three groups. A grouping could be subordinates, superiors, and fellow workers. If you have no subordinates divide them into two groups, superiors and fellow workers. Look at your relations from three view-points—a) Do others like you and respond to you, b) Do they like you but you find it difficult to draw them out or get them to contribute their best, or c) Perhaps you just don't get along well with others. Analyze your relations with the two or three groups. For each (a) give yourself a plus, for each (b) a zero and for each (c) a minus. If your total comes out minus, mark the chart the same; if it's zero, give yourself the same and if plus, a plus.

4. *Personal Contacts*

Business contacts are made both within and without the firm or organization. They can be grouped into: a) Those you must make; your superiors, for example, b) Those you ought to make for the good of doing your job well, and, c) Those you could make for the benefit of yourself if you took advantage of your position. If you are doing no more than meet those persons with whom you must come in contact as part of your daily work routine, your score is a minus. If you are making a deliberate effort to meet with others and discuss mutual or related problems and situations, you are up to the 0 point. Those who also belong to a professional society, who participate in group activities and use the contacts to learn and to bring new ideas to the job obviously are in the plus bracket.

5. *Financial Reserve*

Rating yourself on financial means is difficult because it varies so with your objectives. To keep this simple, the following can be used. If you are completely dependent on your salary, with little or no financial reserve you deserve a minus. If you have no more than the normal rainy day reserve, then yours is still a negative program—you get a zero. If, however, you have enough saving and outside income to finance yourself for six months or longer, in a job with a substantially lower salary or income, give yourself a plus.

6. *Job Opportunities*

This is relatively easy to rate. If you know of no opportunities, give yourself a minus. If you know of openings but have had no offers, give yourself a zero. If you have one or more offers under consideration, it is an easy plus.

EXAMPLE

Profile of Career Advancement Potential	RATING		
	Below Average	Average	Above Average
	—	0	+
1. Technical Competence			+
2. Job Situation			+
3. Human Relations		0	
4. Personal Contacts	—		
5. Financial Reserve	—		
6. Job Opportunities		0	
7. TOTAL POINTS	—2	0	+2

Below is an example of someone who has rated himself and a discussion of the ratings.

Now let's examine the example and see what it tells us and should tell the person who rated himself. As you can see, in the summary, he has two minuses and two plusses. In other words, from an overall standpoint his weak points cancel out his strong points. There is also an even distribution of plusses, zeros and minuses. This means that his potential for advancement is just average, nothing really to cause worry but nothing to bring a feeling of pride. Suppose we next analyze each rating to see what he needs to do to bring himself above average.

The profile indicates an individual who considers himself competent to handle his job. This is borne out by his rating of the job situation. Actually this is as it should be since the degree that a man is technically qualified for his job plays a large part in determining his ability to control his job situation. He needn't worry about taking correspondence courses, attending lectures or taking any positive steps to improve himself or his job situation.

So far his advancement potential is way above average. It begins to drop as he considers the human relations aspects. It goes down even further because of his lack of personal contacts. These two also should be expected to go hand in hand. His relationships with his superiors and co-workers are average but he is not too aggressive about his outside contacts. An improvement in his personal contacts would result in a corresponding improvement in his human relations. The rater appears to be a competent individual who either dislikes people, is afraid of them, or is unsure of himself. In view of his low rating in "Personal Contact" it would be correct to assume the latter. There are books and articles on human relations that should be read. Most of all, overcoming internal inertia and forcing himself to practice meeting others seems to be in order. Fear of others based on unsureness of self can be overcome by experience. If the uncertainty is too ingrained, professional advice from a psychologist might be a wise investment.

Unfortunately Item 5 is one that is descriptive of too many these days. Since the rater is "shy," he is probably a bit too hard on himself on this score and is a little pessimistic as to the amount of financial freedom he has. A good budget or control system would undoubtedy bring this individual into at least the "average" category, should a job opportunity present itself. At least he realizes that extra effort is needed either to save money or to develop an outside source of income.

The job opportunities are evidently there; not sufficiently to have the individual in demand because of his lack of aggressiveness and his inhibitions. They are sufficient to enable the rater to get one of the openings he obviously knows about if he would only become a little more aggressive and stop being afraid of people.

The example was selected because it is fairly typical. Next we shall discuss some non-typical ratings.

What about the rare bird who finds his ratings are practically all on the

minus side of the ledger? Assuming that he is not a manic-depressive rating himself on the downswing, I would say he has obviously obtained or been put in a job beyond his capacity. This is to be expected in the early stages of a career but can happen to anyone at any time, particularly when a major shift is involved. In a normal distribution pattern the line of action is shown by the one or two lower ratings. They are the ones you should work on to improve your potential. Where, as in this case, there are several you have two choices. Select the one that is most fundamental, such as technical competence, and work on that or choose the one that promises the easiest and quickest return. Perhaps a combination of the two would be best. But remember, do not try to tackle all of them at once; concentrate your efforts on one, or at most two weak points.

At the other extreme is the person who finds he is all plusses and full of potential but is sitting still in his job marking time. The chances are there are conditions beyond his control that means he should or must mark time until a job turns up in the right climate for his wife's asthma, or whatever the reason. But it could be that he has just sat too long and plain old inertia mixed with fear of taking a chance has set in. In such cases, the only cure is to have an honest heart to heart talk with yourself before throwing yourself out into a new job. In any event, a chart with all plusses is not necessarily something to be proud of.

The above example shows how a course of action can be outlined. With a little thought and effort you can do the same thing for yourself—IF—you are interested in advancement. END

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EUGENE EMERSON JENNINGS is an active member of SAM, ASPA, ASTD, and IRRA, and has written articles for many magazines associated with the management field. In addition to his present position, he has been connected with several firms in the midwest as a consultant and in the research field. He is a Doctor of Philosophy from Iowa State University.

Elements of Democratic Supervision

by Eugene E. Jennings
Assistant Professor of Industry
Wharton School of Finance and Commerce
University of Pennsylvania

This unique article explores the three types of supervision used by management today: autocratic, laissez-faire, and the democratic. This author gives the points of each, then shows the value to both management and the worker of democratic supervision from his own point of view

THE TERM democratic supervision suffers from overuse and lack of definite meaning. Despite its vagueness, supervisors are prone to attach definite feelings about it. Some believe that it is the latest in what is needed while others cast aspersions upon it as a threat to their authority. In a recent conference the trainees were asked their opinion on what they thought of democratic supervision as a tool. Of twenty trainees, fifteen had very definite opinions of which eight were "all for it" and seven were "completely against it." The remaining five were undecided. [From the discussion it was very clear that few supervisors understood about what they were either for or against and that those who were undecided reasoned that the others knew the least.]

A source of much frustration is on the one hand the supervisors' conscious or unconscious need to be democratic and on the other hand their lack of understanding about what it is. This vagueness discourages the supervisor who attempts to be democratic and in others creates a critical attitude. Here are some elements of modern democratic leadership:

1. Democratic supervision is not the laissez-faire type of supervision in which the workers are left alone to decide their problems and recommend solutions. The inevitable consequence of this approach is that eventually a leader comes forth from the workers to define their demands. One writer suggests that when the supervisor relinquishes his role as a leader, the workers become preoccupied over problems of finding among them a leader who will take their problems to the supervisor and demand action.

In the autocratic type of supervision, which dictates to the workers what their problems are and how they should be solved, again the inevitable consequence is for a leader to arise among the workers and represent the workers' side of the question. This is the role of the steward today. He is needed because the supervisor either misrepresents the workers' problems or does not represent them at all to the superiors.

2. Democratic supervision is not the relinquishing of a firm and definite approach to the workers. So many supervisors feel that they should reduce most of their persuasive influences when they are democratic. This is not necessary. Whereas autocratic force tends to bring out aggressive tendencies on the part of some workers and submissive tendencies on the part of others; a complete lack of firmness on the part of the supervisor can create both aggressive and submissive tendencies among the workers. However, in the latter case, the emotion is not directed against the supervisor (as much as in autocratic supervision) but rather among and against the workers.

In other words, lack of firmness on the part of the supervisor causes bickering and antagonism among the workers, while extreme firmness under autocratic leadership serves to solidify their emotion against him. It is hazardous to believe that the supervisor should be reluctant to take a position or to defend it.

In fact, workers often need supervision that is dependable and definite and can be counted on to follow a steady plan of action. An essential element in democratic supervision is that the supervisor's stand that he takes with respect to a problem is one that has been prescribed by careful consideration of the workers' feelings. These have been solicited before the stand is taken, not afterwards. Even after the stand has been

taken the democratic supervisor leaves the door partly open for more facts and opinions and for the possibility that his stand is incorrect.

In this respect the democratic type is dissimilar to autocratic in which the workers are seldom solicited and the door is always closed and the supervisor's "mind is made up." In laissez-faire type the supervisor never really knows when to close the door and to take a firm position. The essence of democratic supervision is to know how and when to make up one's mind and also be an expert to know when and how to change it.

3. Another mistaken notion about democratic supervision is that the supervisor should attempt to share the work of the subordinates. (To show them that the supervisor is not afraid to help them, to fill in when a worker is absent or to give them a hand when needed.) The most effective supervisor is one who assumes the function traditionally accepted as that of a leader and does not engage in the work done directly by the workers.

There are a number of reasons why this should be done. For one thing, to help the worker out may show up the worker rather than help him. Then, when done too much may reflect on the supervisor's ability to distribute the work load and get necessary help. Third, the better interests of the workers are opposed, especially if the workers are highly unionized and insist that the supervisor refrain from doing work that will help displace a worker.

4. Democratic supervision is not the attempt to keep a close watch on each worker's needs and wants. The "check up" aspect of supervision is less emphasized in democratic supervision. Democratic supervision is not "breathing down the back" type nor the type that goes about "making the rounds" to see what is needed or is wrong. Of course, the latter example is to some extent necessary, but the greatest emphasis in democratic supervision is on the accessibility that the worker has to go on his own volition to the supervisor without the pressure that usually results when the supervisor, regardless of his intent, goes to the worker to find out his problems.

The difference is very subtle, indeed, but so are the differences between democratic supervision and the other types. The feeling that workers can go to their supervisor has tremendous force in giving the supervisor status and respect and in the long run is far more forceful than the feeling that the supervisor can go to the workers and solicit their problems. Both, however, are needed, but the supervisor's accessibility and not the worker's is primary in democratic supervision.

5. Democratic supervision is not a personal thing that is characteristic of some supervisors and not others. Leadership is not a specific trait or syndrome of traits that a person should possess in order to be a democratic supervisor.

The Ultimate Quest of Good Management: The One Best Way

The literature of scientific management abounds with examples of units of work improperly called "elements," which are in no sense elements. A classification for finding The One Best Way to Do Work must deal with true elements, not merely with sub-divisions that are arbitrarily called "elements." "Elements" should be taken for what they really are, namely, sub-divisions and not elements, and not confused with true elements, or fundamental units which cannot be further sub-divided [*therbligs*].

The science of Motion Study consists, therefore, of finding The One Best Sequence of therbligs for each kind of work and the science of management consists of deriving, installing and enforcing the conditions that will permit the work to be done repeatedly in The One Best Way.

This classification for finding The One Best Way to Do Work is applicable to all kinds of work. From THE CLASSIFICATION OF WORK *by Frank B. Gilbreth.*

Few supervisors become democratic when they decide to acquire certain traits like that of friendliness, understanding or respect. The conditions that determine democratic leadership lie among the people who lead and are led and not solely within the personal makeup of the individual who is the leader.

In this sense leadership is a social thing and traits that are desirable in one group or instance may not be in another. Trying to acquire the traits necessary to democratic supervision is similar to trying to find the right mask. Democratic supervision depersonalizes the supervisor and goes to something more important than traits.

For example, it recognizes the functional aspect of leadership; that a supervisor is democratic by serving the interest of the workers. To perform a particular function any number of different traits may be desirable, depending upon the group of workers, their needs and the nature of the supervisor himself. [From one standpoint it is unfortunate that supervisors who are democratic leaders also have certain traits commonly associated with democratic leadership. (This has duped many supervisors into believing that traits are basic to leadership.) One cannot reverse gears and acquire democratic leadership by developing certain kinds of traits.]

In other words, the door is left open for the supervisor regardless of whether or not he has certain traits to become more democratic. Many supervisors have felt that little chance exists that they can ever be more democratic unless they become more friendly, social or understanding, for example. While these are important, they do little to perform functions that the workers actually need. Of the many supervisors who are democratic and social, their sociability does not testify to how they are democratic. Supervisors should quit chasing after traits in order to be democratic. Eventually workers can see through traits that are only skin deep and not expressed in the performance of functions related to their interest.

6. While performing these functions, supervisors should not be trapped into believing that democratic leadership is basically treating each individual as different. Notice that the autocratic supervisor does this as a way of keeping the group broken up. The author has heard many supervisors preach that every worker is in some way different as are his problems and needs. (At the same time give him equal pay, vacation, sick leave, etc.)

In the first place, when the worker is treated as a separate individual he and his problems are often disregarded as being deeply rooted in the social relations of his fellow workers. Thus, at times he may emphasize the group's problem as his own or his own problem as the group's. In the first case, when a worker approaches the supervisor with a personal problem and receives indi-

vidual attention, the supervisor may be thoroughly embarrassed when another worker comes to him with the same problem. (This happens quite often.) The worker thinks the same problem should receive the same treatment and the supervisor may agree, except perhaps he did something for the first worker which he could not do for everyone. To do so may not serve the better interest of the group. How can the worker understand? Can the supervisor tell him that he is a different individual even though the worker retorts that the problem is nevertheless the same. (At this point the supervisor may be accused of playing favorites.)

A Personal Problem Sometimes Affects The Group

One can see how frustrating one feels when this happens. Endless frustration is prevented when the supervisor is conscious of the social relations that workers have and cognizant that what is seemingly a personal problem is perhaps the manifestation of a group problem presented through an individual.

7. At the same time, democratic supervision is not treating everyone as similar and their problems as the same. Supervisors should not go to this extreme. In human relations the similarities among people are few and those that exist do not count much. Supervisors cannot be sensitive to the problems of a group of workers by trying to find what problems are common to them. The lumping together of apparently similar problems and identifying them as common to the group has prevented individual problems from receiving their correct attention. What is common to workers is usually that they have problems and not that their problems are common. Supervisors can be aware of the problems of a group of workers by seeing the differences between their problems. However, as mentioned above, one must be consciously aware of how treating these different problems affects the group.

Two fundamental elements of democratic supervision are that differences between workers' problems that are not self evident are seen by the supervisor and, secondly, that these differences are in some way revealed to the workers. That is to say, the differences are somehow made known to the workers in order that the supervisor is not seen in one instance as playing favorites and in another instance as lumping all of their problems into a common category for equal treatment. Both kinds of conduct are antagonistic to the workers.

8. Democratic supervision is not in opposition or contradiction to efficiency and cost demand problems. Democratic supervision does not prohibit keeping costs down and efficiency maximized. However, it does recognize that matters of cost and efficiency refer to the manner in which people work together and these factors are basic to costs and efficiency. In this sense, democratic supervision is more employee centered than production centered.

In this sense cost and efficiency problems are subordinate to human relations by means of being solved through the efforts of the workers. Thus if a proposal on paper seems very efficient but when brought to the attention of the workers it is vehemently protested, the proposal is then seen in the two lights and a decision is accorded based upon proper consideration of the feelings of the workers and the advantages of the proposal that might accrue when implemented.

Democratic Supervision As Applied To Problem and Solution

Democratic supervision also emphasizes the way a problem and solution are discussed and reached. Democratic supervision is inimical to the procedure whereby the problem and solution are arbitrarily set by the supervisor. Of course, there are some problems and solutions that do not require determining by the workers, but these are not what are referred to in this paper. Herein discussed are problems and solutions that can be discussed by the workers. It is the searching for opportunity to refer problems and solutions to the workers for consideration that significantly sets the democratic type apart from autocratic and laissez-faire types.

9. Democratic supervision is not necessarily a case whereby the formal and informal leader of the workers is one person, namely the supervisor. This is fine if possible, but it is not a requirement. A supervisor may start with a captive audience. That is, his workers may not view him as their natural or indigenous leader. His leadership is more by appointment rather than achievement. Oftentimes supervisors come up against an individual who is an informal leader of the workers. In autocratic supervision his presence would create a challenge to the supervisor and thus promote between them unfriendly feelings. In laissez-faire supervision the informal leader would not be challenged but perhaps encouraged to do some of the leg work of supervision. (He would probably be referred to as a stooge or errand boy.) Soon another informal leader, however, would come forth to engage the workers now and then in numerous and pleasant associations.

Democratic Leadership Promotes Informal Social Leaders

Democratic supervision is dualistic. In one sense it implies guidance and suggestion and in another sense it implies socializing and harmonizing. In the former case, the job is primarily to make people aware of their problems and in the latter case make them forget. Both the guiding type of leadership and the socializing type of leadership are needed. Eventually, however, there will usually arise a worker who somehow has a clever pun or a quick remark or a stirring joke just at the right time that will completely take the spotlight away from the supervisor. This is not unhealthy.

An element of democratic leadership is that one should *promote* informal social leaders among the workers and not oppose them. There is an inevitability even under the best supervisor for the tendency for informal leaders to spring up. These leaders are a source of frustration to the supervisor when they are not allowed the status that means a lot to them. If denied status they usually work to cut the ground out from underneath the supervisor. They will get their status somehow. Rather than try to "lick" them or even "join" them, the democratic supervisor develops them along useful lines. There are never too many informal leaders in democratic supervision.

10. Democratic supervision does not stress the result of what happens when workers have ample opportunity to express themselves. The noun supervision takes a back seat to the verb supervising. What this means is that a supervisor who works toward finally having a smoothly running team may be sadly disappointed when he finds that there is no such thing as a finished team or one that needs no more building.

Man is a homo-viator, which means

never at the goal, always on the way. This has application to the job of building a harmonious group of workers. In democratic supervision it is the building of the house, for example, that counts most since the house is never to be completed. When the supervisor sees this often overlooked point, he can visualize how he can be more effective. For certainly if every argument is a challenge to his success as a supervisor, every difference an indication that he lacks ability, every dispute a sign of defeat, the supervisor will be a failure every time he turns around.

However, when he views the process of supervision strictly as a process and not a product that can be finalized in concrete form, the supervisor views agreement and difference in their natural setting and thus proceeds with less self-reflection and criticism. To build on differences and arguments that arise is the challenge of democratic supervision.

In this respect it is not like the autocratic type that supresses challenge and difference or like the laissez-faire type that ignores them as being only "natural." The foundation of democratic supervision is the creating of more and more opportunity for review and discussion on the part of the workers and supervisors. There is no end to this creating because new problems are always in the making and in need of solving.

11. Lastly, democratic supervision does not recognize as primary and all-inclusive the formal structure, rules and policies of the organization. Many supervisors have revealed to the author the sad consequences of resorting primarily to formal rules and policies in order to establish proper human relationships. Democratic supervision is related profoundly to the supervisor's informal and personal relationships to his workers which are not explicit in the formal policies and rules of the organization. The supervisor's effectiveness is dependent on how and what relationships he can establish with and among the workers.

For example, the autocratic supervisor recognizes a rule for every deed. Whether he made it or it was written in a manual is not important. The laissez-faire supervisor has no rules. The democratic supervisor works within broad rules of the organization and depends primarily upon informal agreements and understanding established by and on behalf of both workers and supervisor.

The "Cooperate Or Else!" Type Of Leadership

In autocratic type of leadership authority precedes cooperation and implies "cooperate, or else!" In laissez-faire type authority is completely subordinate to cooperation. In democratic type of leadership authority and cooperation are and of the same process. Authority is not viewed as basic to cooperation, nor cooperation basic to authority. They are dependent upon each other. For example, the supervisor must have a little authority to get started, but at the same time the workers must have a little cooperation in their hearts before the little authority of the supervisor is useful. Many supervisors have overemphasized their authority and have stifled cooperation on the part of the worker. Others have thrown their authority to the winds and relied upon sheer cooperation. Both cases fail to bring desirable results either to the workers or supervisor.

A writer on the problem of authority suggests that authority is derived from the consent of the workers. Some supervisors find it very difficult to understand that authority is not derived from authority or display of it. Authority is something that arises because certain functions need to be performed and the supervisor has value in performing these necessary functions. In other words, the supervisor should be oriented toward developing a need for supervision and should not take this need for granted. This is what one writer calls developing the "law of the situation" and not that of the individual.

To rely upon the organization chart or the consent and backing of the supervisor's superiors is to acknowledge that the supervisor's personal and informal relations with his workers are in an unhealthy state of affairs. When this is the case there is scant chance that formal authority, rules and policies can repair mended fences. This has been tried far too often with too little success. The solution is through the supervisor's relationships with his workers. This is the challenge offered by democratic supervision END

What A Sensible Report Is Like

Simplicity of presentation of data for the busy executive and the non-statistically minded operating official is essential if the reports are to be read and used. This may mean waiving some of the formalities of presentation developed by professional statisticians. Abbreviated tabular presentation limiting the number of facts shown should be used whenever possible. The statistical tables should not require study and analysis. The problem to which the analysis purports to give the answer should be stated explicitly and expressed in terms in which the operating official thinks. The statistical reports should be written for the consumer and not for other statisticians. The presentation of one central idea in a single report is a useful device for feeding information in pill form; management should not be overwhelmed by lengthy reports. The two-page report is probably the best report. The operating statistician who prepares reports for "publication" will soon cease to play a vital role in operations. — From OPERATING STATISTICS AS A TOOL OF MANAGEMENT, *by Joel Gordon, in* PUBLIC ADMINISTRATION REVIEW, *Summer 1954.*

GEORGE S. ODIORNE has been production supervisor at the American Can Company, has written articles for such authoritative publications as the Arbitration Journal, Personnel, as well as the Time and Motion Study Engineer, an English periodical. Mr. Odiorne is also a member of the American Arbitration Association, on the Labor Panel. He is a member of the Raritan Valley Chapter of SAM.

Today's Shortage of Engineers: Fact or Fancy?

by George S. Odiorne
Management Training Staff
Rutgers University

The shortage of engineers today is directly traceable, says the author, to the profession itself. He bypasses the claims of management that college courses are to blame, pointing directly to a monopolistic tendency in engineering management, and gives several ways the profession can help the situation

UNINSPIRED TEACHING of mathematics in the secondary schools is at the heart of the engineering shortage, according to Leslie R. Grove, wartime head of the Manhattan Project. In a recent speech the one-time general traced a chain of cause and effect in which the student with capacity for becoming an engineer has an unsatisfactory experience with high school mathematics due to inept teaching. He is thereby repelled by mathematics, or is unsuccessful in making a satisfactory grade. Upon matriculation into college he seeks to avoid the imposing barrier of mathematics in the engineering curriculum for fear of failure. Thus, a shortage of engineers.

The implications behind this theory are twofold. First, that there is a shortage of engineers; secondly, that this shortage is due to lack of sufficient applicants for engineering schools. It is but one of the most current in a long series of theories advanced regarding the shortage of engineering graduates, the majority of which are proposals for obtaining more of them. Among some informed manpower specialists however there is a small but growing doubt that there is a shortage of engineers at all. This startling thought has an air of unreality about it, for obviously it is a widely-held view that engineers are in short supply.

A logical starting place is to look at the figures, and they are impressive in themselves. The most widely circulated are those of the Engineers Joint Council which shows that there are at present some 170,000 engineers, and more engineers are needed to fill present vacancies. A definition of "engineers" as used in these figures is that they are eligible for membership in one of the eight major societies which form the Engineers Joint Council. In addition we can add a few thousand more which are entitled to the term engineer by virtue of membership in one of the lesser societies of engineer, not professionally qualified to merit acceptance in the inner circle. Beyond this dual ring is an indeterminate number of individuals who perform all of the functions of engineering but lack certain professional qualifications to enter the magic ring. For example, a Master Mechanics club or Master Plumbers Association would not qualify as a professional engineering group, and would not be tabulated. It is precisely in this area that we run into problems of hazy calculation in our census of engineers.

An eminent jurist is credited with the saying that the reduction of highly uncertain data to concrete figures does not necessarily add to their veracity. This most certainly would seem to have some truth for the shortage of engineers.

In all of the hand-wringing over the shortage of engineers, few if any thinkers are getting to the basic question of exactly what is an engineer. In almost all such discussions the implicit definition of an engineer is frequently that of the professional engineer. Most often this refers to the graduate of a college recognized by the profession, or one who has acquired sufficient reputation in the field of technical achievement to merit his inclusion in the body of the profession. By definition it excludes the draftsman, detailer, mechanic, electrician, millwright, plumbing contractor, methods engineer, cost engineer or foreman who has narrow technical knowledge or craft skills, but lacks formal education in one of the several professional classifications of engineer. It also excludes ordinary persons who have been trained in methods and scientific skills which were beyond the powers

of the greatest experts in the past.

To define the shortage more accurately we might say that the shortage described by the statistics is of professional engineers. It is a moot question whether all of the jobs now vacant require a professional engineer, or if they might possibly be filled by the quick training of ordinary persons in specific, occupational skills. The most typical reply would be an emphatic no, with an occasional grudging 'maybe' from the practical and less professionally-conscious members of the engineering trade. Even if we disagree, this answer is important. What management and the economy as a whole confront is a new and more vigorous form of professionalism than has been heretofore seen in the field of engineering.

Dean Saville in assuming the presidency of the Engineers Joint Council (the inner circle of the eight communicant professional societies of the engineering order) made the following statement, as published in the *New York Times*:

"The council is prepared to meet the challenges presented to the engineering profession in the operations of American industry, of government, in military development, in foreign economic aid, and in the promising fields of atomic power and solar energy utilization."

A Shortage Throwns Added Load on Whole Staff

For the light that it throws upon the problem of the shortage of engineers, this quotation is interesting. Undoubtedly there is a shortage of engineers who can help the council meet all of the challenges which it has taken unto itself. The implication is that the solution of the technical problems involved will come about through the efforts and under the direction of the professional engineer. The challenge, however, is not only to the engineer, but to the skilled craftsman, the machine operator, the accountant, the manager, the salesman and even the politician to solve technical problems that are in their entirety the same problems which the professional engineer must face. This viewpoint is diametrically opposed to the implied concept of professionalism. An affliction which is not unique to engineering, professionalism has the drawbacks of all bureaucracy.

The bureaucracy of the professions is characteristic of European culture, and it is fruitless to discuss whether or not the "hardening of the categories" is imported from abroad, or whether it is a natural outgrowth of our increasing technical maturity. It is equally fruitless to embrace a "realist" attitude which would debunk human behavior and institutions. From the viewpoint of the rational observer, however, it is essential to observe and classify the behavioral traits of such human institutions. We must expect that they will cling to their fundamental professionalism with great tenacity, but we need not necessarily reshape our social or managerial manpower policy to mollify them.

Complication Of Industry Brought Specializations

As more and more business occupations become professions, or their practitioners aspire to professional standing, the levels of bureaucracy become piled one upon another in increasing numbers. Even today there is an increased tendency toward "Associations of Associations." Specialization has grown out of the enlargement and complication of industry, and the increasing demands of the apprenticeship leading to such specialization. Industry has become a vast training ground for professionals, as well as a market for educated engineering talents. As the primary customer for educated labor, industry has turned upon the college and imposed its criteria for training upon it. The classical university which produced men of its own pattern which in turn has a modifying effect upon society in a liberal fashion is faced with the practical problems of accreditation—which is to say survival—by the professional groups it has produced. Thus, the professional engineer can adopt the professional ideology of altruistic service to the community through inspection of academic standards for the training of his profession. In its final analysis it becomes a guildlike closure which achieves a mantle of social respectability without sacrificing the long-run self-interest of the profession. The end result is a combination of professional and business entrepeneur who can exploit his special status.

This is by no means limited to engineering. In practice the engineering profession is still "on the make", for it is one of the easiest of professions to break into without hurdling a legal closure. The surfeit of such engineers as "air conditioning engineers" or "time study engineers" is ample evidence of this. Even the despised "social engineer" is on the rise.

The lawyer who doubles in real estate sales and title searches, the college professor who cashes in on his university connection to sell management consulting, or the pharmacist who because of his professional status is able to keep his general store open night and day, are far more advanced in the stratification of their craft than the engineer. One common characteristic joins them with the professional engineer however. All seek to limit the supply.

A study of the want ads will seemingly prove the actuality of the engineering shortage. Fully one-third of the ads in a classified section chosen at random would consist of job-offers to engineers. These are definite job vacancies, and ones which need immediate replacement. How does this come about?

There is inadequate information about what engineers actually do in industry. The range of jobs held by engineers runs from salesman, foreman, accountant, rate setter, draftsman, estimator, surveyor, into a multitude of occupations far removed from the specific skills which he learned in his professional training. The engineer who uses even half of the specific skills he trained for is becoming an exception. This is partially due to the lack of opportunity for purely engineering jobs in industry, and partially due to an overstimulated demand for men with engineering training for all forms of industrial staff positions.

Many School Training Programs Are At Fault

Why this anomalous demand for men trained in one field to fill positions in unrelated fields? Why aren't the recruiters wooing instead the graduates of business schools or liberal arts colleges rather than the engineering colleges? Part of the answer lies in the innocuous manner in which many business and liberal arts schools conduct their programs. Courses are apt to be repetitive, lax, and pointless. Many are based on verbalisms and pointless philosophies. On the other hand is the rigor and discipline of the engineering curriculum. It produces what is sometimes referred to as "the engineering mind." Perhaps a most appropriate question would be to ask if business, social sciences, or even

the liberal arts could not be taught with as much rigor and discipline as thermodynamics or strength of materials? If such a large percentage of engineering graduates never actually enter their profession, would not any curriculum, rigorously taught, suffice? Until such time as business schools at large provide such training no comprehensive answer can be given.

The personnel department is a crucial point of contact in the problem of the shortage of engineers. Employment managers are frequently in no position to assume leadership in writing qualification sheets for specific jobs. If the sales manager insists upon an engineering degree in his trainees, or the cost accountant requests a half dozen engineers to make cost studies, the employment manager must increase the pressures upon his recruiting staff to comply. Many a personnel man has been known to beat his head against a wall in asking if something less than a mechanical engineer wouldn't do as a shift foreman or conveyor salesman.

Bureaucratic Professionalism On The Increase

It is the engineer himself who must rationalize his job. Definition of those areas in which quick training in non-technical or semi-technical skills are advisable must come from the professional himself. Furthermore a new willingness to provide status and function to such persons within the engineering area must accompany such definition. Unfortunately the trend toward professionalism in its most bureaucratic form is increasing rather than waning.

Faced with the challenges to which Dean Saville alludes, society as a whole cannot await the coming of the final stages of professionalism in engineering, for solution of its problems. The task is one of intensive training of more ordinary people to assume a more substantial role in performing technical functions in industry and business. The shortage is not one of engineers alone, but of trained personnel and workers and every level. Unless the engineers assume leadership in dissipating the bureaucratic aspect of their own professionalism the final solution is apt to be made for them, and not necessarily in terms which they would have chosen. The demands of practical business operations will force solutions in which they have not participated. END

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HERMAN LIMBERG's statements on various management subjects have appeared in such magazines as The Office, Systems, Purchasing, and have been included in The Congressional Record. As a member of the Advisory Committee to New York's Suggestion Award Board, he evaluates reports, and is as well the Management and Training consultant to many New York City agencies

How to Produce, Plan, Package and Sell Scientific Management Analysis

by Herman Limberg
Management Coordinator
The City of New York

This article is a management guide on how to package scientific management. The author describes the product, then goes through to the final presentation of the material. In a profession where methods and techniques are matters for concentration, this article answers in part the important problem of selling scientific management

SCIENTIFIC MANAGEMENT means management through the study, research, and analysis which will produce better ways of attaining management's objectives. Effective tools, techniques, and methods for conducting analysis and research, recording results and "finding the better way" have been developed to facilitate and expedite various management tasks. But the progress in packaging, sales promotion and selling of the products of scientific management has not kept pace with progress in engineering and production.

The development of effective scientific-management-selling techniques may well follow the major functional divisions of a job-order plant. The management survey, which constitutes the manufacturing process, is not adaptable to mass production techniques, but must be patterned and designed to meet the requirements of each custom order. Unlike the job-order plant whose selling function precedes production, the management engineer must sell his product after production. Furthermore, the products of management research and analysis are not tangible materials possessing physical characteristics whose attributes are immediately apparent. They are ideas, intangible products of mental operations, whose acceptability, utility, effectiveness and significance depend not only on their clarity and logical appeal but on the manner of their presentation. The package containing the ideas is often more important than its contents.

The survey report is the package of ideas. Its construction should be guided by the principles and techniques of product design and engineering, packaging and selling. A well conceived, planned, designed, constructed, and packaged survey report should, in effect, sell itself. The following are principles and techniques for guidance in the production of management survey reports.

THE PRODUCT

1. Survey reports should be functionally designed to:

a. Present clearly, adequately, concisely and effectively the results of management surveys and analyses.

b. Serve as a blueprint for action necessary to effectuate improvements, economies, increased efficiency and other related objectives.

c. Stimulate all levels of management to follow a program of continuous self-analysis and improvement.

2. The contents of the survey report should be carefully and logically selected, organized, arranged and presented. The basic components, in the order of presentation are:

a. *Introduction or Preface* (Part I) consisting of:

(1) Assignment (nature of study)

(2) Objectives of the study

(3) Beginning and ending dates of the study

(4) Scope of study

(5) Limitations, if any

(6) Methods used

(7) Sources of information

(8) Acknowledgments of assistance and cooperation received

b. *Summary of findings and recommendations* (Part II). Culled from the body of the report and consisting of clear, accurate and concise statements of pertinent facts, specific recommendations based on related findings, arranged under topic or subject headings used in the body of the report; and a summary of estimated monetary savings and additional income which will result from adoption of the recommendations.

c. *Body of the report* (Part III), which will include:

(1) Definitions of uncommon

or technical terms

(2) Historical background, if pertinent to the subject matter of the survey

(3) Findings, consisting of clear, accurate, concise statements of fact

(4) Discussion of findings, supporting and substantiating data, conclusions, proposals, advantages and disadvantages, pros and cons, estimated results, etc.

(5) Recommendations based on related findings, presenting a clear, workable plan of action in sufficient detail to guide and control installation, follow-up and maintenance of proposals

d. *General comments or conclusions* (Part IV). This may also include review of prior survey reports in the light of the current survey. This part of the report is optional, and should be included only when necessary to a complete presentation.

e. *Appendix* (Part V), which consists of exhibits, explanatory material or data essential and pertinent to the study but not included in the text or body of the report.

3. The form of the survey report should provide for:

a. Simple, clear, logical presentation conducive to reader interest, understanding and acceptance.

b. Uniformity, neatness and arrangement of basic and supporting data to facilitate reading and reference.

The Market For Products Of Management Surveys

The market to which the products of management surveys must be sold consists of:

1. The employees and supervisors of the departments, divisions and sections affected by the survey. They must be sold to insure proper effectuation and maintenance of such changes and improvements which may result from the survey.

2. Representatives of management responsible for the overall efficiency and economy of the activities involved.

3. The public, which receives and pays for the products of services offered by the enterprise, and which may be affected by the changes recommended.

Each of the foregoing groups comprising the market is critical, discriminating, unrelenting and persistent in its demand for good management. The products of the survey must meet their specifications and requirements.

Planning And Production Of The Survey

The following steps comprise the sequence of operations governing the initiation, planning and scheduling of the survey:

1. *Assignment of the survey project.* Survey projects may be based on requests, suggestions or recommendations made to top management or department heads; complaints or suggestions of customers, suppliers, employees or any other interested source. The assignment should be made in the form of a brief memorandum stating in general terms the nature and objectives of the study.

2. *Preliminary or reconnaissance survey to determine in a general way the scope of the problem and the methods and tools to be used.* This includes a review of any prior reports covering the subject of study and conferences with department heads and such other personnel as are concerned with the overall aspects of the study. At this point the selling function really begins, because top management and middle management support is indispensable to the efficient conduct of the survey. Working relationships between analysts and departmental representatives are arranged and the date is set for starting the survey.

3. *Preparation and submission by the analyst in charge of the project to the chief of the management analysis unit of a memorandum* setting forth in specific terms the assignment, objectives, starting and completion dates, procedures and methods to be used, staff analysts assigned, and such other details as are necessary to describe the project.

4. *Review and approval of the memorandum by the chief of the management analysis unit.* Upon approval, a project number is assigned to the study, and a copy of the approved memorandum is returned to the analyst in charge of the project.

5. *Briefing of staff analysts, planning of survey, preparation of working tools.* The analyst in charge explains to his staff analysts assigned to the study the objectives and details of the survey. The analysts develop a plan of procedure for conducting the survey, outlining or charting the various steps in the procedure and scheduling estimated dates of initiating and completing each step. They also prepare the necessary working tools, such as task and activity lists, questionnaires, check lists, process charts, analysis pads, cards, etc.

6. *Introduction of staff analysts to departmental personnel responsible for organizational divisions involved in the survey.* The analyst in charge introduces his staff analysts to the departmental supervisory personnel, arranges for necessary working space and facilities, and gets the survey under way.

7. *Staff meetings with personnel affected by the survey.* A staff meeting called by the respective supervisors to explain the objectives of the survey and the methods to be used in conducting the survey is another constructive step in selling the survey and securing the cooperation of the personnel involved. The analyst in charge may, with the consent of the supervisors, supplement their comments and answer any questions which may be asked by the participating employees.

Proper Organization Of The Material Is Important

Proper recording, compilation, arrangement and organization of material greatly facilitate the design and preparation of the survey report. The following will serve as a helpful guide.

1. Essential, pertinent, significant results of each day's progess and developments are reduced to writing on sheets or cards of standard size and shape. (8½" x 11" paper or 5" x 8" cards are preferred.) Taking notes during an interview or inspection or observation affords greater accuracy than reliance on memory. Data to be recorded include:

a. Results of interviews, inspections, observations

b. Digests of printed materials (annual reports, manuals, etc.)

c. Facts, figures, dates, as well as specific citations and references

d. Authoritative opinions and their source

e. Statistical studies, showing sources of information and methods and bases of analyses

2. Working papers are classified according to subject matter and purpose, numbered and arranged to facilitate identification and reference during progress of the survey and preparation of the report and at some future date when contents of the report may be questioned.

3. Upon completion of each phase of the survey, the pertinent working papers are reviewed and analyzed. Pre-

liminary draft of the report and summary of the findings and recommendations covering that phase of the survey are prepared. These preliminary drafts (handwritten or typed on standard size sheets or cards), are keyed to the applicable working papers and serve as the basis of the outline and complete draft of the final report.

4. This preliminary packaging of the report content preserves it in good condition for later use. Coordination and integration of the component parts greatly facilitate and expedite the preparation and packaging of the final report.

5. In preparing preliminary drafts of the component parts of the survey report, the analyst need not strive for literary style, but rather for clarity, accuracy and adequacy of the subject matter to be presented. The emphasis should be on content, not form.

Specifications For Components Of The Report

1. *Definitions.* Technical, uncommon or special terms used in the report should be clearly defined and explained to facilitate the reader's comprehension of the subject matter. Source or authority for such definitions should be cited.

2. *Historical background.* A brief discussion of the historical background pertinent to the subject matter generally includes origin, development, purposes, functions and accomplishments of the organization, enterprise or activity involved in the study.

3. *Findings.* Findings are statements of fact and should be concise, specific, positive, accurate, pertinent and essential to the study. Findings should not be argumentative or critical, and should exclude conclusions, opinions, proposals, and references to personalities, ability or intentions of personnel. Authoritative opinions may sometimes be presented as findings in support, or in lieu, of actual facts. Such opinions must be supported by citation of the qualifications of their source. Extraneous facts, facts which do not pertain to the objectives of the survey or which do not result in recommendations, should not be included. Findings of fact are the very essence of the survey, and upon their quality depend the validity, and acceptability of the final survey products.

4. *Discussion of findings.* After a finding of fact has been stated, it is followed by:

a. Adequate supporting and substantiating data including specific citations of sources of information.

b. Analysis, discussion, interpretation and evaluation of the findings (the why, how, what, where, when and who), problems involved, conclusions, effects and results (in terms of present manpower, efficiency, costs, service, employee morale, etc.). Clear, logical explanation showing how the facts lead to the proposals and recommendations and the reasons underlying the explanation.

c. Discussion of proposals for change or improvement, advantages and disadvantages, pros and cons, representing possible differences in viewpoints, anticipated or estimated results (in terms of manpower, monetary savings, simplification of operations, increased efficiency and productivity, benefits to employees, better service, etc.).

d. Elaboration and exposition of findings, which should avoid generalities and abstract statements, and which should be objective, clear, specific, accurate, concise, logical, valid and cogent to insure the acceptability and sale of the resulting recommendations.

5. *Recommendations.* Recommendations are the ideas, the products and end-results of the management survey. They should be based on the analysis of the findings to which they pertain.

a. Recommendations should present a clear, sound, workable plan of action—a detailed blueprint of the how, why, what, when, where, and who—to be followed to effectuate and maintain the changes, improvements or innovations proposed. These should indicate the time when such action should be initiated and completed, as well as the officials, executives or supervisors who should assume responsibility therefor.

b. Recommendations should not contain suggestions for further study of problems or areas pertinent to the survey. Such problems or areas should be fully covered and included in the survey. Other studies which are not pertinent to, nor included in, the objectives of the survey, but the need for which has been revealed during the survey, should be reported in a separate memorandum to the chief of the management analysis unit, recommending that such studies be made.

6. *Summary of findings and recommendations.* The findings and recommendations (paragraph 3 and 5 above) are listed under their respective topic or subject headings, in the same sequence in which they are arranged in the body of the report. This summary, which precedes the body of the report, affords the reader a quick and clear preview of the substance of the report. Recommendations follow their related findings as closely as possible. In some cases, there may be one recommendation for each finding. In other instances, there may be one recommendation for several findings, or several recommendations for one finding. Where, under a single subject heading, there are several findings for each of which there is a recommendation, either of the following arrangements may be used:

a. Each finding immediately followed by its related recommendation

b. A group listing of all the findings, numbered in sequence, followed by related recommendations listed and numbered to correspond with the findings.

The Contents Of The Summary

The number of the page, in the body of the report, which contains the discussion and elaboration, is shown opposite each finding and recommendation. This summary consists only of those findings and recommendations included in the body of the report. Conversely, all findings and recommendations contained in the body of the report are included in the summary of findings and recommendations. A summary of estimated savings and revenue follows the summary of findings and recommendations.

7. *By-products.* Additional areas of study not contemplated in the original objectives or plan of the survey, but developed during the survey and pertinent thereto, are fully treated and incorporated in the survey report.

8. *Exhibits.* Charts, tables, graphs, drawings, pictures or sketches, which illustrate and clarify the written presentation, compel reader interest and attention. Exhibits should be incorporated in the body of the report wherever their inclusion will not interfere with the logical and orderly continuity of the presentation. Pertinent and essential exhibits which cannot be incorporated in the text of the report should be included in the appendix. Such exhibits should be limited to the size of the paper (usually 8½"x11") on which the report is produced and to items which can be economically reproduced in quantity.

9. *General comments, conclusions, etc.* Where necessary or desirable, a concluding section of pertinent, general comments, conclusions, or review of prior studies in the light of the current survey may be included in the report.

10. *Appendix.* Pertinent supporting data, explanatory material or exhibits, which cannot be incorporated in the body of the report, and a bibliography (if any) are included in an appendix to the report, within the limits specified for exhibits (paragraph 8 above). An appendix number or letter should be assigned to each item.

PLANNING THE SURVEY REPORT

1. *Outline.* The first step in the production of the survey report is the planning of its content, arrangement and form. Upon completion of the survey, the analyst in charge and the staff analysts who participated in the survey prepare an outline of the final report. The outline represents the table of contents of the report. The outline is based on the working papers and preliminary drafts of the various sections of the report to which it should be keyed to facilitate reference during the report writing process.

The outline is the skeletal frame of the report and consists of the major components, divisions and section headings comprising the report in the order of presentation. (See paragraph 2, under *The Product*, page 2.) The outline serves as a guide or check list, as well as a control device, for sifting, selecting and arranging the material and data to be included in the final report.

2. *Draft of summary of findings and recommendations.* After completion of the outline, the analyst in charge and the staff analysts prepare a draft of the findings and recommendations, summarizing the results (or products) of the survey, concisely and accurately stated, arranged and numbered to facilitate correlation of the recommendations and pertinent findings. Several copies of this draft should be prepared for distribution to department heads and supervisory personnel concerned at a conference arranged to review and discuss the findings and recommendations, secure agreement and resolve possible differences in points of view.

ASSEMBLING AND PACKAGING

Assembling and packaging the survey results comprise the necessary writing effort to fill out and give body to the report outline previously prepared. In this effort clarity, conciseness, adequacy and keenness of expression are emphasized. The following principles should be applied for effective results:

1. *Sentences* should be short, simple, clear, complete statements of proper grammatical construction.

2. *Paragraphs*, which constitute packages of ideas, should deal with one topic or thought, concisely but adequately developed, and limited in length to the requirements of the presentation and scope of the reader's concentration. Short paragraphs contribute to the good appearance of the report, and are more effective than solid, massive blocks of material in attracting and holding the reader's attention and interest.

3. *A topic sentence* should introduce each paragraph to show its contents and significance, and its relationship to the preceding paragraphs. Topic sentences tie together the various paragraphs and effect smooth transition and flow of thought from one topic to another.

4. *Subject and section headings* should be used to identify, distinguish and classify the various divisions and sections of the report. These headings should be listed in the table of contents.

5. *The final package*, or complete survey report, should consist of:

a. Cover, showing title of the survey, date of submission of report
b. Letter of transmittal
c. Table of contents
d. Introduction or preface (Part I)
e. Summary of findings and recommendations (Part II)
f. The report (Part III)
g. General conclusions, (Part IV)
h. Appendix (Part V)

The expenditure of time and effort involved in the production of management survey reports should be commensurate with the objectives to be obtained, but careful planning, development and presentation are essential to the projection and selling of survey results. Constant application to the production of the survey report of the principles and techniques used in management analyses will insure attainment of the essential qualities of the end product. END.

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A RESEARCH PUBLICATION OF THE SOCIETY FOR ADVANCEMENT OF MANAGEMENT, INC.

New Management Writing . . .

MANAGEMENT IN THE HOME, *by Lillian M. Gilbreth, Orpha Mae Thomas and Eleanor Clymer. Dodd, Meade, $3.95.*

CALLING ALL WIVES: Some one has been making another Survey of women and has come out with the dark secret that many of them don't want to mend their ways—at least in housekeeping. They may be taking one hundred steps to make a cake when they could do it in twenty; they may be bending and reaching and stooping and lifting when they don't have to. . . . But that's the way they've always done it, or the way mother or grandmother did it, and they would rather die than change . . . and usually do.

This book—which is the last word by top authority on modern housekeeping, was reviewed recently on a radio program. The authors were asked to explain what they themselves had proved—how time, energy and good nature can be saved in the daily round by a bit of study beforehand of the work to be done, proper placement of tools and materials, proper attitudes—and how all this adds up to a happier home.

The MC told about the Survey and its Secret. "What about women like that?" she wanted to know, "How do you get *them* to change their ways?"

"Oh, you don't", blithely replied the author addressed, "You see, I am more interested in the *young* woman—the one who wants the best possible home and will make the effort to have it".

Knowing Lillian Gilbreth, who was speaking, every one understands that when she says "young", she does not refer to age but to a certain quality of mind. Some women, she would say, may be old in their twenties, if their minds are inflexible, while others at eighty may remain young if they remain open-minded.

"Young at heart" is what she meant.

So "Management in The Home" is for the young at heart who welcome an intelligent, authoritative, warm-hearted approach to their housekeeping and homemaking problems; and who aren't stopped in their tracks at the mention of "scientific management" — even though that may be the kind of work their husbands perform.

The courageous ones discover that these two words aren't something cut and dried that is just for offices and factories but that it can be used also in the home, for greater satisfaction and happiness of all concerned.

Some husbands looking over their wives' shoulders may appear very wise as they read the Chapter headings: Goals and Budgets; Motion-Mindedness; Charts; Maintenance; Making Changes in Tools, Storage, Layout and Working Conditions. . . .

But wives must not get an inferiority complex. Surveys also have been made of Men in their office and factories and some of them also are set in their ways, or their father's or grandfather's ways, and they would rather die than change —and frequently do. (Please note: This does *not* apply to S.A.M. members.)

So if you're young at heart and have the open mind that in spite of mother or grandmother or sheer inertia will look into your housekeeping, homemaking ways to see if they can be improved, you will want to add this newest book to your dom. econ. shelves.

Two of the authors—Lillian Gilbreth and Orpha Mae Thomas—are highly qualified as successful homemakers as well as carrer women. Eleanor Clymer has contributed ably as coordinator and editor.

There is an excellent Bibliography for the homemaker who takes her job seriously. And there is a distinctly feminine touch in the advice on how to keep yourself easy to look at while working and when father and the children come home.

New attitudes take the drudgery out of housework as we see that homemaking is a family project and that it can be creative and exciting.

As the authors point out, you can measure money, time and energy that go into homemaking. What can not be measured are the imagination, skill, courage and other ingredients of the magic that turns houses into homes and an assortment of different personalities into one happy family.

By Pearl F. Clark

THE STATESMAN'S YEAR-BOOK, 1954, *edited by S. H. Steinberg, Ph. D. St. Martin's Press, 103 Park Avenue, New York. 1608 pages. $8.50.*

Contrary to expectation, this book with its formidable title is small enough to be carried easily—an ideal companion for a management man's business junket. Engineers, management consultants, ambitious executives with national or international connections will find it useful.

For anyone, the *Year-Book* is a mine of information, gathered from individual governments, about every country on the globe, in or out of the United Nations. To the management man who prides himself on his facts, the book is a necessity; its statistics are immaculate. The detail is obviously the result of careful, interested research, the writing is clear and simple. And for simple argument-settling between friendly authorities in every line of management, the *Year-Book* is impregnable.

HOW TO INCREASE EXECUTIVE EFFECTIVENESS, *edited by Edward C. Bursk. The Harvard University Press, Cambridge, Massachusetts. 163 pages. $3.25.*

This volume is a collection of the addresses and panel discussions of the twenty-third National Business Conference of the Harvard Business School Association held in June, 1953. It is a distinguished coverage of well-worked and familiar management ground. Various sections are handled by such management names as F. C. Crawford, Chairman of the Board, Thompson Products, Inc.; Lt. Col. Lyndall Urwick; James Olsen of Booz, Allen & Hamilton, and other eminent and well-known speakers. Some topics investigated are Executive Freedom, How To Develop General Managers (and Sales Executives, Manufacturing Executives, and Controllers and Financial Executives), and How To Increase Your Own Administrative Effectiveness.

AMERICA'S RESOURCES OF SPECIALIZED TALENT, *prepared by Dael Wolfle, Director, the Commission on Human Resources and Advanced Training. Harper & Brothers, 49 E. 33 Street, New York, N. Y. 332 pages. $4.00.*

One of the great management cries since shortly after World War II has been concerned with the growing shortage of personnel, for almost every conceivable field. This book tells just how the personnel pool looks, and then gives

the facts. As a study of the needs and lacks of various fields in business, industry, and government, the book has a very valuable dual purpose. It is valuable for executives in the personnel field who want to know just where certain types of skilled workers are; and the book is of value to students or those preoccupied with searching for jobs in some specific field. The single volume contains data on the following points: Educated Manpower; Fields of Specialization: College Graduation Trends, Occupational Distribution of College Graduates, Supply and Demand in Specialized Fields, and many others. A down-to-earth book on an important subject.

INDUSTRIAL CONFLICT, *edited by Arthur Kornhauser, Robert Dubin, and Arthur M. Ross. The McGraw-Hill Book Company, 330 West 42 Street, New York. 551 pages. $6.50.*

The provocative title here somewhat obscures one of the most valuable facts about the book itself. This is that the viewpoint of *Industrial Conflict* is neither that of management nor of labor. This alone makes the volume worth inspection.

Actually, *Industrial Conflict* is an interpretive history, using the approach of social science to study industrial conflict within its proper frame and as a part of our whole society. The book does not offer quick nostrums nor smooth interpretations or solutions. It says what happened, and tries handsomely to tell why. Nature and meaning, causes and conditions of conflict are its forte. Then, too, it gives methods and techniques of past and present, used with various degrees of success in solving industrial relationship problems. Good for the student, the serious reader, and above all for the management consultant.

SUCCESSFUL COMMERCIAL CHEMICAL DEVELOPMENT, *prepared by the Commercial Chemical Development Association, with H. M. Corley as Editor-in-Chief. John Wiley & Sons, Inc., 440 Fourth Avenue, New York 16, N. Y. 376 pages. $7.75.*

This book, interesting only to one segment of the management profession, is candidly the work of many minds. In the foreword its purpose is stated directly: "To document in one volume the most enlightened present-day knowledge of the important principles of every essential step, as well as the pitfalls to be avoided, in selecting promising new chemicals and rapidly developing them to the stage of economic importance."

However, the volume obviously has been done with exceptional care: complete coverage of all sales and production factors are listed as part of the unique foreword, with a key to give the reader the guide to work already done, how well, how much remains, and other helpful data.

The twenty-one chapters cover every area of chemical development as well as research, and the formidable list of people who helped with the book is alone guarantee of its quality.

A GUIDE TO MODERN MANAGEMENT METHODS, *by Perrin Stryker and the Editors of Fortune. McGraw-Hill, 330 West 42 Street, New York. 300 pages. $3.50.*

A Guide to Modern Management Methods sets several standards for management communications of any kind. It is the top management book this department has read this year, by several counts. It dispenses with doubletalk; anyone can read it with great pleasure. It has something to say, says it, and stops. Its approach is one of candor, its examples are not disguised. It covers Executive Development; Psychological Counseling; Training Manpower; Organizing, Planning, and Control; Management Counsel, Communications; Participation; Executive Compensation; Retirement.

Among many other interesting facts, the book reminds that the professional management man dates at the earliest from just before World War II. Practical management is one of modern business's late developments, and the authors make no bones and less historical pretensions about it. Most management literature does.

The *Guide* is easy, interesting reading:—an eminently readable book for anyone who enjoys a well-told, fascinating story and one can give an explanation of management work to people in any endeavor.

New Products...

A new automatic "brain" which will control any electrical machine operating through a cycle has been introduced by Johnson Fare Box Company. This **automatic timer and cycle control** sensing device is an inexpensive unit which may be used for timed quantity measurements in production processing of liquids or solids, for coin-operated vending machines.

A **master portable duplicator** which has an actual printing area of 8x13½ inches, produces high quality prints in 1 to 5 colors in any size from postcard to legal, has been introduced by Master Addresser Company. Built with self-oiling bronze bearings, weighs only 12 pounds.

A portable, **semi-automatic filling machine** that will feed food, cosmetic, dairy, chemical, paint and similar semi-liquid and semi-solid products into all types of containers including tubes, has been developed by the Filler Machine Company. This versatile unit fills between 15 and 55 containers per minute, can be easily cleaned and changed over quickly to handle different products.

The first **wide screen system** with stereophonic sound for 16mm movies has been developed by Bell and Howell Company. The projected picture fills a curved screen 2.5 times as wide as it is high, with an expanse nearly equal to the normal field of vision of the human eye. Three-dimensional or stereophonic sound emanates from the part of the screen where the action takes place.

Now available for civilian use is a new recording device which is capable of delivering 24 or 48 hours of continuous, unattended **high-quality magnetic recording** on either one or two channels of communication simultaneously, on a single reel of tape. The manufacturer is SoundScriber Corporation.

A system that provides low-cost dictation equipment is a new product of The Gray Manufacturing Company called the **PhonoAudograph 111.** It is a combination recording-transcribing unit for use in a central dictation system. The method utilizes a single centrally-located recorder to which may be connected from one to twelve individual dictating instruments resembling standard telephone handsets. This "Add-a-Unit" plan provides for expansion of the dictation system by tying in additional recorder-transcriber units as needed.

OCTOBER CHAPTER ACTIVITIES

CHAPTER	SUBJECT	SPEAKER	TITLE	PLACE	DATE
Alabama	The Operation of Sales Organization—Panel Discussion	Charles T. Clayton	V. P., Liberty National Life Ins. Co.	Tutwiler Hotel	12
		Roper Dial	Manager, Sears Roebuck		
		Eugene Brooks	V. P., Continental Gin Company		
		Dr. Rich. T. Eastwood	Director, University Center, U. of Alabama		
Baltimore	Small Business: America's Biggest Business	Harry A. Barron	Mgr., Maryland Branch, Small Business Admin., U. S. Government	Stafford Hotel	5
	Plant Tour			Bethlehem Steel Company	13
	Are You Profiting by the New Possibilities under the Labor Law — Roundtable Discussion	Edward L. Rich, Sr.	Attorney	Assembly Room, Baltimore Assoc. of Commerce	20
Binghamton	Management Looks at Material Handling	A. T. Gaudreau	Gaudreau, Rimbach & Assoc.	Hotel Arlington	13
Central Pennsylvania	The Value of a Purchasing Manual to Management	C. W. McVickar	Director of Purchasing and Traffic, Rockwell Manufacturing Co.	DuBois, Pa.	21
Charlotte	Cost Reduction			Hotel Barringer	12
Chicago	Fall Industrial Engineering Conference				1
	Development of the Industrial Engineer in a Competitive Economy	Eugene P. Berg	Gen'l Mgr., Link-Belt Co.		12
		Harold H. Steele	Chief Ind. Engr., Belden Mfg. Co.		
	So You Want a New Job—More Money—More Responsibility	Guy Reed	Exec. V. P., Harris Trust & Savings		26
Cincinnati	Management Performance Standards	S. Kenneth Dee	Mgr., Control Section, Koppers Company	Marie Antoinette Ballroom	7
Clearing	Controllers and Cost Accountants	E. A. Gustafson—Chairman		Clearing Industrial Club	5
	Harvard Case Study Group	J. M. Duffy—Chairman		Clearing Industrial Club	7
	Operations Research Forum	R. C. Lindberg—Chairman		Bedford Park Community Center	14
	Harvard Case Study Group	J. M. Duffy—Chairman		Clearing Industrial Club	21
Cleveland	Operations Research	Dr. Russell C. Ackoff	Case Institute of Technology		4
		Edward C. Varnum	Burber-Coleman Co.		
		Paul H. Randolph	Armour Research Foundation, Ill. Inst. of Technology		
Columbus	Joint Meeting with Sales Executive Club—Packaging and Its Effect on Modern Marketing				21
Dallas	To Be Selected	To Be Announced		Melrose Hotel	13
Dayton	Organization in Business and Industry				26
Fox Valley	Sociological Factors in Industrial Safety	Dr. William Kerr	Illinois Institute of Technology	Elk's Club, Appleton, Wisc.	14
Georgia	Packaging	To Be Announced		Georgian Terrace Hotel	21
Greenville	What Makes a Successful Executive	Harry Hopkins	V. P., Tool & Pinion Company	Hotel Greenville	13
Hudson Valley	Incentive for Attracting New Industry to New York State	J. Harold DeNike	Dir. of Div. of Commerce & Industry, N. Y. State Dept. of Commerce	Hendrick Hudson Hotel, Troy, N. Y.	5
Indianapolis	What Management Has Yet To Learn in Human Relations	Fred Smith	V. P., Gruen Watch Company	The Marott Hotel	14

OCTOBER CHAPTER ACTIVITIES

CHAPTER	SUBJECT	SPEAKER	TITLE	PLACE	DATE
Kansas City	New Industries Dinner "The Lincoln Electric Story"	J. F. Lincoln	Chairman of Board, Lincoln Electric Company	Town House	19
Knoxville	The Impact of Atomic Energy on Industry	Dr. Larson	Dir., O.R.N.L.		12
Lancaster	Operations Research, A Challenge to Modern Management	Dr. E. A. Johnson	Dir., Operations Research Office, John Hopkins U.	Yorktowne Hotel, York, Pa.	19
Lehigh Valley	Compilation and Use of Standard Data	William Beardsley	General Electric Co., Schenectady	Howard Johnson's Restaurant, Allentown, Pa.	12
Madison	Role of the Executive Wife	Dr. Paul Mundie			6
Milwaukee	Midwest Regional Management Conference "Techniques for Stretching Your Managerial Dollar"			Hotel Pfister	14 & 15
Nashville	Wage Incentives	Bruce Payne	President, Bruce Payne & Assoc.	Andrew Jackson Hotel	14
New Haven	Personality, The Key to Supervision	Paul Stokes	Management Consultant	Yale University, New Haven	28
New Orleans	To Be Selected	A. P. Frame	V. P., Cities Service Refining Co.	Roosevelt Hotel	12
New York		Peter Drucker		Hotel Roosevelt	21
Northern New Jersey	Case Studies	Al Stark		Essex House, Newark	7
	Case Studies	Al Stark		Essex House, Newark	14
	How Industrial Psychology Looks at Management	Dr. F. J. Gaudet	Ind. Psychologist, Stevens Institute	Essex House, Newark	21
	Guaranteed Annual Wage	W. Minden	Union Leader-UAW-CIO	Star Kimble Co., Bloomfield, N. J.	28
Philadelphia	Why Are You in Business	Carl A. Beck	President, Chas. Beck Machine Corp.	Poor Richard Club	5
Portland	Depreciation Bill for Corporations			Pacific Power & Light, Board Rm., Public Service Bldg.	27
Providence	Business Outlook for 1955	Philip Young		Sheraton-Biltmore	25
Raritan Valley	Labor Management Seminar & Dinner Meeting "Labor Problems"	David Kaplan	Int. Brotherhood of Teamsters	Roger Smith Hotel, New Brunswick, N. J.	20
		Mark Starr	Educational Dir., Int. Ladies Garment Workers' Union		
		Sol Stetin	Int. V. P. & Reg. Dir., Middle Atlantic States Textile Workers' Union of America		
		Martin Gerber	Reg. Dir., United Automobile Workers, C.I.O.		
	Dinner Meeting—"Labor & Management Rights, Privileges, Duties & Responsibilities"	Reverend Dennis J. Comey, S.J.	Inst. of Ind. Rel., St. Joseph's College		
Reading		Charles A. Thomas	Pers. Mgr., Standard Pressed Steel Co.		11
Richmond	Management Problems	Edward T. Ellis	Dir. of Hum. Rel., McCormick & Co.		26
Trenton	Atomic Energy—Will It Change Industry	Dr. Warren W. Miller	Assoc. Prof., College of Chemistry & Physics, Penn State University	Hotel Hildebrecht	19
Twin City	Identifying Management Functions			Coffman Memorial Union, U. of Minnesota	14
Washington				Willard Hotel	21
Western N. Carolina		William E. Barksdale			7
Wilmington	Work Sampling—In The Office — In Construction — In Production	J. M. Kalbach R. Anderson	DuPont Co. DuPont Co.		
Worcester	The Importance of Sound Purchasing	Herbert Layport	Dir. of Purchasing, Wyman-Gordon Co.	Hickory House	18

CIPM Reports . . .

Saul M. Silverstein, President of the Rogers Corporation, Manchester, Connecticut, and twice a participant in FOA-CIPM seminars in Belgium, has remarked: "The United States is indebted to Europe for the benefits derived from the Industrial Revolution; now it is apparent that Europe and the rest of the free world must soon be indebted to the United States for the benefits of the 'Marketing Revolution' which is in progress here."

Speaking at the 37th Annual Conference of the International Labor Organization in Geneva, Switzerland, last June, William L. McGrath explains, in the following excerpts from his speech, how the "marketing revolution" has been the main spur to high American living standards, and how our own experience may contribute to technological developments in other countries.*

. . . I want to explain to you today what we in the United States call the technique of "creating consumer demand"—or, to use simpler words, *getting more people to want to buy the things we make.*

Orders for the things we make mean production, payrolls, and a higher standard of living . . . In the United States the major share of our business and our employment is occupied with making things that people want, rather than what they actually have to have . . .

This did not happen overnight. Originally the United States was an underdeveloped country. Less than 100 years ago, a large share of our people still lived in one-room log cabins. What took place in our country since then can take place now in nations whose economy is today in transition from subsistence farming to industrial production.

What happened was: as we filled our basic needs and began to make the things that people wanted above their needs, we began to realize the benefits of operating under the free competitive system.

Under this system, the company that gave the best values to the public kept its business . . .

Competing companies strive to get business away from each other by offering a better product at a lower price. But price was only part of the story. How about purchasing power? We began to realize that to gain broader markets it was not enough just to offer better values. We would also have to pay higher wages, so that our people could afford to buy the things they helped to make.

Thus, it is inherent in our competitive system, under which monopolies are outlawed, that greater productivity in selling things must go hand-in-hand with greater productivity in making things, and that—as ownership shares the fruits of higher productivity among its customers and its employees, (as well as itself)—the purchasing power of all three economic groups is improved, and the standard of living of the total population rises in the process.

In the old days a manufacturer, making a certain product, built it the way he thought it ought to be built, found out what it cost to make it, added enough to his cost to represent a substantial profit and thereby arrived at the price—and then set out to sell it. He sold whatever number would sell at that price . . .

Under the spur of competition, manufacturers in the United States awakened to the fact that it is the customer, not the manufacturer, who determines the market, and that the place to start is with the customer . . .

What we have learned in the United States is that highly satisfactory profits can be earned on low profit margins. You don't make money in a competitive economy by keeping the price up and making a big margin of profit per unit of sale. You make more money by cutting your price to where you have a small margin of profit, but increasing your volume of sales. In short, the better you do for the customer, the better you do for yourself . . .

Every day somebody invents something new or better, that people want. Can it be sold? The answer is probably "yes", if you can get the price down. Well, you can get the price down if you can create enough demand so that you can use the techniques of volume production . . .

Can this principle of creating production and payrolls out of human desires be applied all over the world? I think it can, by applying the techniques which we have proved by experience in the United States.

I am glad to report that a start has been made in this direction.

Under the auspices of the United States Foreign Operations Administration, the Council for International Progress in Management is recruiting teams of marketing executives, men who have gained such experience in their own businesses, to discuss the techniques of creating consumer demand with businessmen in other countries.

Several of these teams have already participated in Seminars on this subject in various European countries, at the invitation and request of local business groups. It is significant that these marketing teams returned with the conviction that Europe has, within the borders of its various countries, markets whose potentials have barely been tapped.

Nearly 100 management men from the United States have participated in the program of the Council for International Progress in Management, through more than 20 teams in 9 countries . . .

Once you establish a market by making people want something you can furnish at a price they can afford, you have greater productivity, higher payrolls, and a rising standard of living.

This method requires, however, three conditions for its successful operation: First, a competitive economy; second, a sincere belief in the desirability of giving the consumer the most you can for his money; and third, a conviction that employees are your best customers.

. . . I think we can accomplish far more by interchange of ideas than we can by the passing of conventions. Progress in the standard of living arises primarily from better employer-employee relations, better production methods, better marketing methods, better utilization of new techniques, and above all, a fuller development of human understanding. None of these objectives can be achieved by legislation. . . .

* U. S. Employer Delegate to I.L.O.; President, Williamson Heater Company, Cincinnati; President SAM 1947-1948.

The Council For International Progress in Management, formerly the National Management Council, is a non-profit, non-political organization devoted to the promotion of the practice of scientific management on the international level. SAM is a charter member of CIPM.

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